



# Mathematical Reviews

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## Annual Index — 1991

## Subject Index 00 — 58

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American Mathematical Society

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## Subject Index

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- All-Union School: ★ Function Theory ★ Collection of papers from the All-Union School on Function Theory. (Not in MR)  
 Conference: ★ Algebra ★ Международная Конференция по Алгебре. (Russian) [International Conference on Algebra] (Not in MR)  
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- Artificial intelligence** ★ Encyclopedia of artificial intelligence. Vol. 1, 2. 91b:68094
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Fel, Jing Gao. Local analytical methods for digital simulation of dynamical control system. 91i:93058

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Geszti, Tamás. ★ Physical models of neural networks. 91g:92004

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Li, Bing Qian. Three-data modelling of grey system theory. (Not in MR)

Li, Yao Xian (with Zhao, Yu Fu). The application of grey system theory to long-term prediction of weather. (Not in MR)

Marchuk, G. I. (with Aloyan, A. E.) ★ Математическое моделирование в задачах экологии. (Russian) [Mathematical modeling in problems in ecology] 91m:92038

More, Jorge J. A collection of nonlinear model problems. 91f:00010

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Peterson, Ivars. Searching for new mathematics. (Not in MR)

Rumchev, Ventseslav G. (with James, D. J. G.) The role of nonnegative matrices in discrete-time mathematical modelling. 91d:15039

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(Russian) [Modeling in scientific-technical research] 91i:00014

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## 00A79 Physics (use more specific entries from Sections 70 through 86 when possible)

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Saslin, M. Ya. ★ Первая Всероссийская Школа по Основаниям Математики и Теории Функций. (Russian) [First All-Russian School on the Foundations of Mathematics and the Theory of Functions] 91k:00009

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Reports:

Seminar of the I. N. Vekua Institute of Applied Mathematics, Extended Sessions

★ Доклады расширенных заседаний семинара Института прикладной математики им. И. Н. Веква. Том 4, вып. 1. (Russian) [Reports of the extended sessions of the seminar of the I. N. Vekua Institute of Applied Mathematics. Vol. 4, no. 1] 91k:00008a

— ★ Доклады расширенных заседаний семинара Института прикладной математики им. И. Н. Веква. Том 4, вып. 2. (Russian) [Reports of the extended sessions of the seminar of the I. N. Vekua Institute of Applied Mathematics. Vol. 4, no. 2] 91k:00008b

— ★ Доклады расширенных заседаний семинара Института прикладной математики им. И. Н. Веква. Том 4, вып. 3. (Russian) [Reports of the extended sessions of the seminar of the I. N. Vekua Institute of Applied Mathematics. Vol. 4, no. 3] 91k:00008c

Saratov. ★ Первая Всероссийская Школа по Основаниям Математики и Теории Функций. (Russian) [First All-Russian School on the Foundations of Mathematics and the Theory of Functions] 91k:00009

School:

Foundations of Mathematics and the Theory of Functions. ★ Первая Всероссийская Школа по Основаниям Математики и Теории Функций. (Russian) [First All-Russian School on the Foundations of Mathematics and the Theory of Functions] 91k:00009



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- Sverdlovsk ★ Конференция Молодых Математиков. (Russian) [Conference of Young Mathematicians] (Not in MR)

## Items with secondary classifications in 00B05

- (Avuls, Xavier J. R.) see Mathematical and computer modelling in science and technology, 91m:00006

## Items listed otherwise than by author

- Chicago, IL ★ Mathematical and computer modelling in science and technology. 91m:00006

## Conference:

- Mathematical and Computer Modelling ★ Mathematical and computer modelling in science and technology. 91m:00006
- Mathematical and computer modelling in science and technology ★ Mathematical and computer modelling in science and technology. 91m:00006

## 00B10 Collections of articles of general interest

## Items with secondary classifications in 00B10

- (Howson, A. G.) see Popularization of mathematics, 91m:00007
- (Kahane, Jean-Pierre) see Popularization of mathematics, 91m:00007
- (Zhitomirskii, G. L.) see Theory of semigroups and its applications, 91e:20005

## Items listed otherwise than by author

- Popularization of mathematics ★ The popularization of mathematics. 91m:00007
- Theory of semigroups and its applications ★ Теория полугрупп и ее приложения. (Russian) [Theory of semigroups and its applications] 91e:20005

## 00B15 Collections of articles of miscellaneous specific content

- (Abramov, A. A.) see Analytic and numerical methods for solving problems in mathematical physics, 91e:00006

- (Aisagaliev, S. A.) see Control of dynamical systems, 91h:00026
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- Mathematical modeling and automated systems (in control processes)** ★ Математическое моделирование и автоматизированные системы (в процессах управления). (Russian) [Mathematical modeling and automated systems (in control processes)] 91m:00015
- Mathematical modeling and discrete optimization** ★ Математическое моделирование и дискретная оптимизация. (Russian) [Mathematical modeling and discrete optimization] 91m:00016
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- Mathematical models and methods for solving problems in continuum mechanics** ★ Математические модели и методы решения задач механики сплошной среды. (Russian) [Mathematical models and methods for solving problems in continuum mechanics] 91j:00011
- Mathematical notes** ★ Notas de matemática. No. 100. [Mathematical notes. No. 100] 91k:00022
- Mathematical problems in nonlinear analysis and the control of dynamical systems** ★ Математические вопросы нелинейного анализа и управления динамическими системами. (Russian) [Mathematical problems in nonlinear analysis and the control of dynamical systems] 91k:00023
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- Mechanics and applied mathematics** ★ Механика и прикладная математика. (Russian) [Mechanics and applied mathematics] 91k:00025
- Methods in applied mathematics and mathematical physics** ★ Методы прикладной математики и математической физики. (Russian) [Methods in applied mathematics and mathematical physics] 91k:00026
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- Nonlinear equations and variational inequalities. Linear operators and spectral theory** ★ Нелинейные уравнения и вариационные неравенства. Линейные операторы и спектральная теория. (Russian) [Nonlinear equations and variational inequalities. Linear operators and spectral theory] 91e:00016
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- Onieva, Victor Manuel** ★ Aportaciones matemáticas en memoria del Profesor Victor Manuel Onieva Alexandre. (Spanish) [Mathematical contributions in memory of Professor Victor Manuel Onieva Alexandre] 91m:00014
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- Probability theory. Mathematical statistics. Theoretical cybernetics** ★ Теория вероятностей. Математическая статистика. Теоретическая кибернетика. Том 29. (Russian) [Probability theory. Mathematical statistics. Theoretical cybernetics. Vol. 29] 91m:00018
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- Reliability in computational mechanics** ★ Reliability in computational mechanics. 91g:00036
- Reports of the Mathematics Seminar of Brescia** ★ Rendiconti del Seminario Matematico di Brescia. Vol. 9. (Italian) [Reports of the Mathematics Seminar of Brescia. Vol. 9] 91h:00025
- ★ Rendiconti del Seminario Matematico di Brescia. Vol. 10. (Italian) [Reports of the Mathematics Seminar of Brescia. Vol. 10] 91h:00026
- School:**
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- Celestial Mechanics and Space Research** ★ Seminar on Celestial Mechanics and Space Research. Seminar on Stellar Structure and Stellar Evolution. 91k:00029
- Computer-aided Problem-solving/Computer Analysis** ★ Rechnergestützte Problemlösung/Computeranalytik. (German) [Computer-aided problem-solving/computer analysis] 91h:00022
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- Studies in applied mathematics and information science** ★ Исследования по прикладной математике и информатике. (Russian) [Studies in applied mathematics and information science] 91g:00038
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- Tartu** ★ Проблемы теоретической и прикладной математики. (Russian) [Problems of pure and applied mathematics] 91i:00018
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- Theory and modeling of control systems** ★ Теория и моделирование управляющих систем. (Russian) [Theory and modeling of control systems] 91e:00019
- Warsaw** ★ Approximation and function spaces. 91k:00017
- Weibig** ★ Rechnergestützte Problemlösung/Computeranalytik. (German) [Computer-aided problem-solving/computer analysis] 91h:00022
- Workshop:**
- Algebra and Topology** ★ Algebra and topology 1990. 91k:00012
- Reliability in Computational Mechanics** ★ Reliability in computational mechanics. 91g:00036
- Yearbook:**
- Surveys on mathematics** ★ Jahrbuch Überblicke Mathematik. 1991. (German) [Yearbook surveys on mathematics. 1991] 91k:00033



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- (Arnol'd, V. L.) see *Theory of singularities and its applications*, 91i:58003  
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- Berlin ★ *Seminar Analysis of the Karl-Weierstrass-Institute of Mathematics*, 1986/87, 91f:58002  
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 — ★ *Current problems in mathematics. Newest results*, Vol. 32, 91h:00036  
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- Functional-differential equations ★ *Функционально-дифференциальные уравнения*, (Russian) [Functional-differential equations] 91h:34001  
 Itogi Nauki i Tekhniki ★ *Современные проблемы математики. Фундаментальные направления*, Том 15, (Russian) [Current problems in mathematics. Fundamental directions. Vol. 15] 91h:42021  
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 Michel, Horst ★ *Prof. Dr. sc. Horst Michel zum Gedenken*, (German) [Professor Horst Michel in memoriam] 91h:00039  
 Conference:  
 Algebra and Logic ★ *Proceedings of the Conference "Algebra and Logic"*, Sarajevo 1987, 91m:00021  
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 Horst Michel in memoriam ★ *Prof. Dr. sc. Horst Michel zum Gedenken*, (German) [Professor Horst Michel in memoriam] 91h:00039  
 Proceedings:  
 Conference "Algebra and Logic" ★ *Proceedings of the Conference "Algebra and Logic"*, Sarajevo 1987, 91m:00021  
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## 00B25 Proceedings of conferences of miscellaneous specific interest

- (Accardi, Luigi) see *Quantum probability and applications*, 91i:00023  
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- (Bănzaru, T.) *see* Proceedings: Seminar on Mathematics and Physics, 91e:00034
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- (Bekur, L. A.) *see* Algebra and analysis, 91m:00022
- (Bordalo, Gabriela) *see* Lattices, semigroups, and universal algebra, 91h:00030
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- (Brenbia, C. A.) *see* Boundary elements X, 91h:00041; 91h:00042; 91h:00043; 91h:00044; Advances in boundary elements, 91f:00014; 91f:00015 and 91f:00016
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- (Bureš, Jaroslav) *see* Proceedings: School on Geometry and Physics, 91h:00049
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- (Butler, Geoffrey J.) *see* Conference: Differential Equations and Mathematical Biology, 91k:00035
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- (Castillo, Jesús M. F.) *see* Colloquium: 1988-1990, 91m:00025
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- (Cobos, José) *see* Colloquium: 1988-1990, 91m:00025
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- (Comfort, W. W.) *see* Proceedings: Conference on Locales and Topological Groups, 91k:00040
- (Concus, Paul) *see* Geometric analysis and computer graphics, 91g:00045
- (Connes, Alain) *see* Operator algebras, unitary representations, enveloping algebras, and invariant theory, 91m:00036
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- (Conway, John B.) *see* Operator theory, 91e:00030
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- (Ward, Joseph D.) *see* Approximation theory, 91j:41001 and 91j:41002
- (Wildlund, Olof B.) *see* Symposium: Domain Decomposition Methods for Partial Differential Equations, 91e:65010
- (Yamada, Miyuki) *see* Proceedings: Symposium on the Semigroup Theory and its Related Fields, 91k:20005
- Items listed otherwise than by author**
- Algebraic logic and universal algebra in computer science** ★ Algebraic logic and universal algebra in computer science. 91g:03005
- All-Union Conference:**
- Geometry and Analysis** ★ Всесоюзная Конференция по Геометрии и Анализ. (Russian) [All-Union Conference on Geometry and Analysis] 91m:00012
- All-Union Symposium:**
- Group Theory** ★ XI Всесоюзный Симпозиум по Теории Групп. (Russian) [XI All-Union Symposium on Group Theory] 91k:20004
- American Mathematical Society Translations, Series 2** ★ American Mathematical Society Translations. Series 2. Vol. 147. 91m:00044
- Ames, IA** ★ Algebraic logic and universal algebra in computer science. 91g:03005
- Amsterdam** ★ Logics in AI. 91k:68012
- Approximation theory** ★ Approximation theory VI. Vol. I. 91j:41001
- ★ Approximation theory VI. Vol. II. 91j:41002
- Basel** ★ Computer arithmetic and self-validating numerical methods. 91k:65003
- Bielefeld** ★ Representation theory of finite groups and finite-dimensional algebras. 91m:20005

**Bifurcation and chaos: analysis, algorithms, applications** ★ Bifurcation and chaos: analysis, algorithms, applications. 91m:58001

#### Biography:

Soslin, M. Ya. ★ Первая Всероссийская Школа по Основаниям Математики и Теории Функций. (Russian) [First All-Russian School on the Foundations of Mathematics and the Theory of Functions] 91k:00009

Birmingham ★ Inequalities. 91m:26002

#### Birthday:

Cotlar, Mischa ★ Conference in Honor of Mischa Cotlar. 91m:00041

Kargapolov, M. I. ★ XI Всесоюзный Симпозиум по Теории Групп. (Russian) [XI All-Union Symposium on Group Theory] 91k:20004

Lions, Jacques-Louis ★ Frontiers in pure and applied mathematics. 91m:00042

Brno ★ Differential geometry and its applications. 91b:53002

Brunswick, ME ★ Mathematical developments arising from linear programming. 91k:90007

Buenos Aires ★ Conference in Honor of Mischa Cotlar. 91m:00041

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Castiglione ★ Effective methods in algebraic geometry. 91m:14003

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Chaos & order ★ Chaos & order. 91m:58002

College Station, TX ★ Approximation theory VI. Vol. I. 91j:41001

— ★ Approximation theory VI. Vol. II. 91j:41002

#### Colloquium:

Michel, Horst ★ Prof. Dr. sc. Horst Michel zum Gedenken. (German) [Professor Horst Michel in memoriam] 91k:00039

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Computational acoustics ★ Computational acoustics. Vol. 1. 91k:76002

— ★ Computational acoustics. Vol. 2. 91k:76003

— ★ Computational acoustics. Vol. 3. 91k:76004

Computational solution of nonlinear systems of equations ★ Computational solution of nonlinear systems of equations. 91e:65005

Computer arithmetic and self-validating numerical methods ★ Computer arithmetic and self-validating numerical methods. 91k:65003

#### Conference:

Algebraic Logic and Universal Algebra in Computer Science ★ Algebraic logic and universal algebra in computer science. 91g:03005

Bifurcation and Chaos: Analysis, Algorithms, Applications ★ Bifurcation and chaos: analysis, algorithms, applications. 91m:58001

Computer Arithmetic and Self-validating Numerical Methods ★ Computer arithmetic and self-validating numerical methods. 91k:65003

Cotlar, Mischa ★ Conference in Honor of Mischa Cotlar. 91m:00041

Differential Geometry and Its Applications ★ Differential geometry and its applications. 91b:53002

Elliptic Curves and Modular Forms in Algebraic Topology ★ Elliptic curves and modular forms in algebraic topology. 91a:57021

Function Spaces ★ Function spaces. 91e:46004

Geometry of Solutions to Partial Differential Equations ★ Symposia Mathematica. Vol. XXX. 91b:35002

Inequalities ★ Inequalities. 91m:26002

Mathematical Chemistry ★ Methods of mathematical chemistry. 91h:92001

Mathematical Developments Arising from Linear Programming ★ Mathematical developments arising from linear programming. 91k:90007

Multigrid Methods ★ Proceedings of the Fourth Copper Mountain Conference on Multigrid Methods. 91e:65008

Navier-Stokes Equations ★ The Navier-Stokes equations. 91f:35003

Problems Involving Change of Type ★ Problems involving change of type. 91b:35001

Representation Theory of Finite Groups and Finite-dimensional Algebras ★ Representation theory of finite groups and finite-dimensional algebras. 91m:20005

Vector and Parallel Computing ★ Vector and parallel computing. 91k:65014

Contemporary Mathematics ★ Mathematical developments arising from linear programming. 91k:90007

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Cortona ★ Symposia Mathematica. Vol. XXX. 91b:35002

Curves and surfaces in CAGD '89 ★ Curves and surfaces in CAGD '89. 91e:65006

Differential geometry and its applications ★ Differential geometry and its applications. 91b:53002

Durham, NH ★ Operator theory: operator algebras and applications. Part 1. 91g:47001

— ★ Operator theory: operator algebras and applications. Part 2. 91g:47002

Edinburgh ★ Reaction-diffusion equations. 91h:35006

Effective methods in algebraic geometry ★ Effective methods in algebraic geometry. 91m:14003

Elliptic curves and modular forms in algebraic topology ★ Elliptic curves and modular forms in algebraic topology. 91a:57021

Fort Collins, CO ★ Computational solution of nonlinear systems of equations. 91e:65005

Frontiers in pure and applied mathematics ★ Frontiers in pure and applied mathematics. 91m:00042

Function spaces ★ Function spaces. 91e:46004

Galveston, TX ★ Methods of mathematical chemistry. 91h:92001

Halle ★ Numerical treatment of differential equations. 91f:65004

— ★ Prof. Dr. sc. Horst Michel zum Gedenken. (German) [Professor Horst Michel in memoriam] 91k:00039

Heidelberg ★ Stochastic modelling in biology. 91j:92001

Hopf algebras ★ Hopf algebras. 91k:16001

Horst Michel in memoriam ★ Prof. Dr. sc. Horst Michel zum Gedenken. (German) [Professor Horst Michel in memoriam] 91k:00039

Houston, TX ★ Third International Symposium on Domain Decomposition Methods for Partial Differential Equations. 91e:65010

Il Ciocco ★ Recent advances in Fourier analysis and its applications. 91g:42001

Illiers-Combray ★ Workshop on Deductive Database Theory. (Not in MR)

#### IMACS Symposium:

Computational Acoustics ★ Computational acoustics. Vol. 1. 91k:76002

— ★ Computational acoustics. Vol. 2. 91k:76003

— ★ Computational acoustics. Vol. 3. 91k:76004

Inequalities ★ Inequalities. 91m:26002

K-theory and homological algebra ★ K-theory and homological algebra. 91h:19001

Kolymbari ★ Nonlinear evolution equations and dynamical systems. 91f:58001

Kungurka ★ XI Всесоюзный Симпозиум по Теории Групп. (Russian) [XI All-Union Symposium on Group Theory] 91k:20004

Kyoto ★ Proceedings of the International Symposium on the Semigroup Theory and its Related Fields. 91k:20005

Lawrence, KS ★ Proceedings of the Seventh Great Plains Operator Theory Seminar. 91e:47001

Lecture Notes in Computer Science ★ Algebraic logic and universal algebra in computer science. 91g:03005

— ★ Logics in AI. 91k:68012

Lecture Notes in Mathematics ★ Elliptic curves and modular forms in algebraic topology. 91a:57021

— ★ The Navier-Stokes equations. 91f:35003

— ★ K-theory and homological algebra. 91h:19001

— ★ Methods of nonconvex analysis. 91h:49002

Lecture Notes in Physics ★ Problems involving change of type. 91b:35001

Logics in AI ★ Logics in AI. 91k:68012

Mathematical developments arising from linear programming ★ Mathematical developments arising from linear programming. 91k:90007

#### Meeting:

EURO Working Group on Financial Modelling ★ Proceedings of the 5th Meeting of the EURO Working Group on Financial Modelling. 91h:90005

Methods of mathematical chemistry ★ Methods of mathematical chemistry. 91h:92001

Methods of nonconvex analysis ★ Methods of nonconvex analysis. 91h:49002

#### Miniconference:

Chaos and Order ★ Chaos & order. 91m:58002

Montreal, PQ ★ Proceedings of the Joint Concordia-Sherbrooke Seminar Series on Functional Integration Methods in Stochastic Quantum Mechanics. (Not in MR)

#### NATO Advanced Study Institute:

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Fourier Analysis and Its Applications ★ Recent advances in Fourier analysis and its applications. 91g:42001

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Nonlinear evolution equations and dynamical systems ★ Nonlinear evolution equations and dynamical systems. 91f:58001

Nonlinear evolution equations that change type ★ Nonlinear evolution equations that change type. 91e:35004

Novosibirsk ★ Всесоюзная Конференция по Геометрии и Анализу. (Russian) [All-Union Conference on Geometry and Analysis] 91m:00012

Numerical treatment of differential equations ★ Numerical treatment of differential equations. 91f:65004

Numerical treatment of eigenvalue problems ★ Numerical treatment of eigenvalue problems. Vol. 5. 91m:65005

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— ★ The Navier-Stokes equations. 91f:35003

— ★ Numerical treatment of eigenvalue problems. Vol. 5. 91m:65005

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— ★ Operator theory: operator algebras and applications. Part 2. 91g:47002

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— ★ Computational acoustics. Vol. 3. 91k:76004

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Meeting of the EURO Working Group on Financial Modelling ★ Proceedings of the 5th Meeting of the EURO Working Group on Financial Modelling. 91h:90005

Operator Theory Seminar ★ Proceedings of the Seventh Great Plains Operator Theory Seminar. 91e:47001

Seminar on Mathematical Structures in Field Theories ★ Proceedings Seminar 1986-1987. Mathematical Structures in Field Theories. 91h:81005

Seminar Series on Functional Integration Methods in Stochastic Quantum Mechanics ★ Proceedings of the Joint Concordia-Sherbrooke Seminar Series on Functional Integration Methods in Stochastic Quantum Mechanics. (Not in MR)

Symposium on the Semigroup Theory and its Related Fields ★ Proceedings of the International Symposium on the Semigroup Theory and its Related Fields. 91k:20005

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Prof. Dr. sc. Horst Michel zum Gedenken ★ Prof. Dr. sc. Horst Michel zum Gedenken. (German) [Professor Horst Michel in memoriam] 91k:00039

Progress in Mathematics ★ Effective methods in algebraic geometry. 91m:14003

— ★ Representation theory of finite groups and finite-dimensional algebras. 91m:20005

Puerto de la Cruz ★ Computation of curves and surfaces. 91e:65004

Random graphs '87 ★ Random graphs '87. 91i:05002

Reaction-diffusion equations ★ Reaction-diffusion equations. 91h:35006

Recent advances in Fourier analysis and its applications ★ Recent advances in Fourier analysis and its applications. 91g:42001



## Reports:

- Seminar of the I. N. Vekua Institute of Applied Mathematics, Extended Sessions**  
 ★ Доклады расширенных заседаний семинара Института прикладной математики им. И. Н. Веква. Том 4, вып. 1. (Russian) [Reports of the extended sessions of the seminar of the I. N. Vekua Institute of Applied Mathematics. Vol. 4, no. 1] 91k:00008a  
 — ★ Доклады расширенных заседаний семинара Института прикладной математики им. И. Н. Веква. Том 4, вып. 2. (Russian) [Reports of the extended sessions of the seminar of the I. N. Vekua Institute of Applied Mathematics. Vol. 4, no. 2] 91k:00008b  
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- Representation theory of finite groups and finite-dimensional algebras** ★ Representation theory of finite groups and finite-dimensional algebras. 91m:20005

## Research Institute:

- Operator Theory: Operator Algebras and Applications** ★ Operator theory: operator algebras and applications. Part 1. 91g:47001  
 — ★ Operator theory: operator algebras and applications. Part 2. 91g:47002
- Saratov** ★ Первая Всероссийская Школа по Основаниям Математики и Теории Функций. (Russian) [First All-Russian School on the Foundations of Mathematics and the Theory of Functions] 91k:00009

## School:

- Foundations of Mathematics and the Theory of Functions** ★ Первая Всероссийская Школа по Основаниям Математики и Теории Функций. (Russian) [First All-Russian School on the Foundations of Mathematics and the Theory of Functions] 91k:00009

## Seminar:

- Algebra** ★ K-theory and homological algebra. 91h:19001
- Computational Solution of Nonlinear Systems of Equations** ★ Computational solution of nonlinear systems of equations. 91c:65005
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- Mathematical Structures in Field Theories** ★ Proceedings Seminar 1986-1987. Mathematical Structures in Field Theories. 91h:81005
- Numerical Treatment of Differential Equations** ★ Numerical treatment of differential equations. 91f:65004
- Operator Theory** ★ Proceedings of the Seventh Great Plains Operator Theory Seminar. 91c:47001
- Random Graphs and Probabilistic Methods in Combinatorics** ★ Random graphs '87. 91c:05002
- Vekua Institute of Applied Mathematics** ★ Доклады расширенных заседаний семинара Института прикладной математики им. И. Н. Веква. Том 4, вып. 1. (Russian) [Reports of the extended sessions of the seminar of the I. N. Vekua Institute of Applied Mathematics. Vol. 4, no. 1] 91k:00008a  
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## Session:

- Methods of Nonconvex Analysis** ★ Methods of nonconvex analysis. 91h:49002
- Sherbrooke, PQ** ★ Proceedings of the Joint Concordia-Sherbrooke Seminar Series on Functional Integration Methods in Stochastic Quantum Mechanics. (Not in MR)

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- Stochastic modelling in biology** ★ Stochastic modelling in biology. 91j:92001
- Stuttgart** ★ Problems involving change of type. 91h:35001
- Symmetries in science** ★ Symmetries in science. II. 91m:81007
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## Symposium:

- Approximation Theory** ★ Approximation theory VI. Vol. I. 91j:41001  
 — ★ Approximation theory VI. Vol. II. 91j:41002
- Domain Decomposition Methods for Partial Differential Equations** ★ Third International Symposium on Domain Decomposition Methods for Partial Differential Equations. 91c:65010
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- Semigroup Theory and its Related Fields** ★ Proceedings of the International Symposium on the Semigroup Theory and its Related Fields. 91k:20005
- Surfaces in Computer Aided Geometric Design** ★ Curves and surfaces in CAGD '89. 91c:65006
- Symmetries in Science** ★ Symmetries in science. II. 91m:81007
- Tbilisi** ★ K-theory and homological algebra. 91h:19001
- Tromsø** ★ Vector and parallel computing. 91k:65014
- Varenna** ★ Methods of nonconvex analysis. 91h:49002
- Vector and parallel computing** ★ Vector and parallel computing. 91k:65014
- Working Group:**  
**Financial Modelling** ★ Proceedings of the 5th Meeting of the EURO Working Group on Financial Modelling. 91h:90005
- Workshop:**  
**Deductive Database Theory** ★ Workshop on Deductive Database Theory. (Not in MR)
- Eigenvalue Problems in the Natural and Engineering Sciences and their Numerical Treatment** ★ Numerical treatment of eigenvalue problems. Vol. 5. 91c:65005
- Logics in AI** ★ Logics in AI. 91k:68012
- Nonlinear Evolution Equations and Dynamical Systems** ★ Nonlinear evolution equations and dynamical systems. 91f:58001
- Stochastic Modelling in Biology: Relevant Mathematical Concepts and Recent Applications**

## Workshop: (cont'd.)

- ★ Stochastic modelling in biology. 91j:92001
- Würzburg** ★ Bifurcation and chaos: analysis, algorithms, applications. 91m:58001

## 00B30 Festschriften

- (Cartier, Pierre) see Festschrift: Grothendieck, Alexander, 91h:00035  
 (Cotlar, Mischa) see Conference: Cotlar, Mischa, 91m:00041  
 (Dautray, Robert) see Frontiers in pure and applied mathematics, 91m:00042  
 (Grothendieck, Alexander) see Festschrift: Grothendieck, Alexander, 91h:00035  
 (Illusie, Luc) see Festschrift: Grothendieck, Alexander, 91h:00035  
 (Katz, Nicholas M.) see Festschrift: Grothendieck, Alexander, 91h:00035  
 (Laumon, Gérard) see Festschrift: Grothendieck, Alexander, 91h:00035  
 (Lions, Jacques-Louis) see Frontiers in pure and applied mathematics, 91m:00042  
 (Manin, Yu. I.) see Festschrift: Grothendieck, Alexander, 91h:00035  
 (Ribet, Kenneth A.) see Festschrift: Grothendieck, Alexander, 91h:00035

Items listed otherwise than by author

## Birthday:

- Cotlar, Mischa ★ Conference in Honor of Mischa Cotlar. 91m:00041  
 Grothendieck, Alexander ★ The Grothendieck Festschrift. Vol. I. 91h:00035  
 Lions, Jacques-Louis ★ Frontiers in pure and applied mathematics. 91m:00042  
 Buenos Aires ★ Conference in Honor of Mischa Cotlar. 91m:00041

## Conference:

- Cotlar, Mischa ★ Conference in Honor of Mischa Cotlar. 91m:00041

## Festschrift:

- Grothendieck, Alexander ★ The Grothendieck Festschrift. Vol. I. 91h:00035  
 Frontiers in pure and applied mathematics ★ Frontiers in pure and applied mathematics. 91m:00042

Progress in Mathematics ★ The Grothendieck Festschrift. Vol. I. 91h:00035

Items with secondary classifications in 00B30

- (Bodendisk, Rainer) see Topics in combinatorics and graph theory, 91m:05005  
 (Henn, Rudolf) see Topics in combinatorics and graph theory, 91m:05005  
 (Kasahara, K.) see Current topics in partial differential equations, 91m:35003  
 (Mizohata, Sigeru) see Current topics in partial differential equations, 91m:35003  
 (Ohya, Yujiro) see Current topics in partial differential equations, 91m:35003  
 (Ringel, Gerhard) see Topics in combinatorics and graph theory, 91m:05005  
 (Shimokura, N.) see Current topics in partial differential equations, 91m:35003

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## Birthday:

- Mizohata, Sigeru ★ Current topics in partial differential equations. 91m:35003  
 Current topics in partial differential equations ★ Current topics in partial differential equations. 91m:35003

## Meeting:

- Graph Theory ★ Topics in combinatorics and graph theory. 91m:05005  
 Oberwolfach ★ Topics in combinatorics and graph theory. 91m:05005  
 Topics in combinatorics and graph theory ★ Topics in combinatorics and graph theory. 91m:05005

## 00B50 Volumes of selected translations

- (Kasim-Zade, O. M.) see Cybernetics collection. New series, 91b:00055 and 91m:00043  
 (Lupanov, O. B.) see Cybernetics collection. New series, 91b:00055 and 91m:00043  
 (Silver, Ben) see American Mathematical Society Translations, Series 2, 91b:00054 and 91c:00039

Items listed otherwise than by author

- American Mathematical Society Translations, Series 2 ★ American Mathematical Society Translations. Series 2. Vol. 145. 91b:00054  
 — ★ American Mathematical Society Translations. Series 2. Vol. 146. 91c:00039  
 Cybernetics collection. New series ★ Кибернетический сборник. Новая серия. Вып. 26. (Russian) [Cybernetics collection. New series. No. 26] 91b:00055  
 — ★ Кибернетический сборник. Новая серия. Вып. 27. (Russian) [Cybernetics collection. New series. No. 27] 91m:00043

Selected translations ★ Selected translations. 91k:00043

- ★ Selected translations. 91c:00040  
 — ★ Selected translations. 91f:00022  
 — ★ Selected translations. 91g:00047  
 — ★ Selected translations. 91k:00044  
 — ★ Selected translations. 91k:00045

Sugaku Expositions ★ Sugaku Expositions. 91h:00025

Items with secondary classifications in 00B50

- (Arkhangelskii, A. V.) see General topology, 91g:54001  
 (O'Shea, Donald B.) see General topology, 91g:54001  
 (Pontryagin, L. S.) see General topology, 91g:54001

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- Encyclopaedia of Mathematical Sciences ★ General topology. I. 91g:54001  
 General topology ★ General topology. I. 91g:54001  
 Mathesis ★ Mathesis. (Spanish) 91b:00032a  
 — ★ Mathesis. (Spanish) 91b:00032b  
 — ★ Mathesis. (Spanish) 91b:00032c  
 — ★ Mathesis. (Spanish) 91b:00032d  
 — ★ Mathesis. (Spanish) 91b:00033a  
 — ★ Mathesis. (Spanish) 91b:00033b  
 — ★ Mathesis. (Spanish) 91b:00033c  
 — ★ Mathesis. (Spanish) 91b:00033d

- ★ *Mathesis*. (Spanish) 91b:00034  
 — ★ *Mathesis*. (Spanish) 91e:00015

## 00B55 Miscellaneous volumes of translations

(Silver, Ben) see *American Mathematical Society Translations*, Series 2, 91m:00044

Items listed otherwise than by author

*American Mathematical Society Translations*, Series 2 ★ *American Mathematical Society Translations*. Series 2. Vol. 147. 91m:00044

*Current problems in mathematics. Newest results* ★ *Current problems in mathematics. Newest results*. Vol. 32. 91h:00036

*Probability theory. Mathematical statistics. Theoretical cybernetics* ★ *Probability theory. Mathematical statistics. Theoretical cybernetics*. Vol. 26. 91g:00048

Items with secondary classifications in 00B55

Bauer, Friedrich Ludwig (with Goos, Gerhard) ★ Информатика. Часть 1, 2. (Russian) [Informatics. Part 1, 2] 91m:68001

Bunimovich, L. A. (with Kornfeld, I. P.; Dobrushin, R. L.; Yakobson, M. V.; Maslova, N. B.; Pesin, Ya. B.; Sinai, Ya. G.; Sukhov, Yu. M.; Vershik, A. M.) ★ *Dynamical systems*. II. 91i:58079

Dobrushin, R. L. see Bunimovich, L. A.; et al., 91i:58079

(Ershov, A. P.) see Bauer, Friedrich Ludwig, 91m:68001

Goos, Gerhard see Bauer, Friedrich Ludwig, 91m:68001

(Kerbel, V. G.) see Bauer, Friedrich Ludwig, 91m:68001

Kornfeld, I. P. see Bunimovich, L. A.; et al., 91i:58079

Maslova, N. B. see Bunimovich, L. A.; et al., 91i:58079

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(Sabel'fel'd, V. K.) see Bauer, Friedrich Ludwig, 91m:68001

Sinai, Ya. G. see Bunimovich, L. A.; et al., 91i:58079

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All-Union School:

Function Theory ★ *Collection of papers from the All-Union School on Function Theory*. (Not in MR)

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Dushanbe ★ *Collection of papers from the All-Union School on Function Theory*. (Not in MR)

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*Theory and applications of differentiable functions of several variables* ★ *Theory and applications of differentiable functions of several variables*. XIII. (Not in MR)

## 00B60 Collections of reprinted articles [see also 01A75]

Items with secondary classifications in 00B60

(von Neumann, John) see John von Neumann, 91e:01028

(Oxtoby, J. C.) see John von Neumann, 91e:01028

(Pettis, B. J.) see John von Neumann, 91e:01028

(Price, G. Bailey) see John von Neumann, 91e:01028

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John von Neumann ★ *John von Neumann, 1903-1957*. 91e:01028

## 01-XX History and biography [see also the classification number -03 in the other sections]

### 01-00 General reference works (handbooks, dictionaries, bibliographies, etc.)

Navia, Luis E. ★ *Pythagoras*. (Not in MR)

(New, John A.) see *Bibliography: History of science and its cultural influences*, 91g:01001 (Pythagoras) see Navia, Luis E., (Not in MR)

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 Koblitz, Neal Recollections of mathematics in a country under siege. 91m:01003  
 Krantz, Steven G. Mathematical anecdotes. 91i:01092  
 Lal, Sunder Cardan and Banach: a comparative study. 91i:01095  
 McArthur, Charles W. ★ Operations analysis in the U.S. Army Eighth Air Force in World War II. 91m:01032  
 Merzbach, Uta C. The study of the history of mathematics in America: a centennial sketch. 91k:01009  
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 Restivo, Sal The social life of mathematics. 91a:00011  
 Vogt, Annette Zu den Anfängen der deutsch-sowjetischen Wissenschaftsbeziehungen nach 1945. Zum 45. Jahrestag der Befreiung vom Faschismus. [On the beginnings of German-Soviet scientific relations after 1945. On the 45th anniversary of liberation from fascism] (Not in MR)

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#### Colloquium:

- Soviet Finite Mathematics ★ Colloquium on Soviet Finite Mathematics. 91e:01019

#### Discussion:

- Large-scale finite mathematics ★ Colloquium on Soviet Finite Mathematics. 91e:01019

### 01A99 Miscellaneous topics

- Benkő, József see Sofonea, Liviu, (91k:53005)  
 Bérczi, Sz. Symmetry and technology in ornamental art of old Hungarians and Avar-Onogurians from the archaeological finds of the Carpathian Basin, seventh to tenth century A.D. 91a:01058b  
 Byrne, Catriona The left-handed Pythagoras. (Not in MR)  
 Cherbachi, W. K. In the tower of Babel: beyond symmetry in Islamic design. 91a:01058c  
 Dahlke, Richard (with Fakler, Robert A.; Morash, Ronald P.) A sketch of the history of probability theory. 91i:01148  
 Degani Castellani, Franca Some collections of letters in the Biblioteca Estense di Modena. (Italian) 91k:01019  
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 Golland, Louise Karl Menger and taxicab geometry. 91i:01149  
 Grauert, Hans Die Unendlichkeit in der Mathematik. [Infinity in mathematics] (Not in MR)  
 Kapur, Jagat N. Encounters of a working mathematician with history of mathematics. 91i:01150  
 Loeb, A. L. The magic of the pentangle: dynamic symmetry from Merlin to Penrose. 91a:01058a  
 Lourenço, Marcos Luiz Playing with multiplication. (Portuguese. English summary) (Not in MR)  
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 Ricker, V. Frederick Why do we use "m" for slope? (Not in MR)  
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 Singal, Asha Rani Pythagorean triples. (Not in MR)  
 Smale, Stephen Newton's contribution and the computer revolution. 91i:01155  
 Sofonea, Liviu (with Benkő, József) Die "Platonische Körper". Geometrische, physische, historische und epistemologische Aspekte. ["Platonic solids". Geometric, physical, historical and epistemological aspects] (see 91k:53005)  
 Yakusheva, Zh. S. Problems in the history of teaching high school mathematics in Russia after 1917. (Russian) (see 91a:00023)  
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- Yu, Xiao Qun Number—a mysterious cultural phenomenon. (Chinese) (Not in MR)
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- Alarcón Athens, Winston An instrumental foundation of arithmetic. (Spanish. English summary) 91h:03000
- Artmann, Benno The cloisters of Hauterive. (Not in MR)
- Bassegoda Nonell, D. Juan Line geometry and architecture. (Spanish. English and Catalan summaries) 91c:51039
- (Boltyanskii, V. G.) *see* Yaglom, I. M., (Not in MR)
- Brodskii, I. N. Aristotle's assertoric syllogistics represented in the form of a calculus of relative modalities. (Russian) (see 91e:03005)
- Chimenti, Frank A. Pascal's wager: a decision-theoretic approach. 91i:90099
- Deakin, Michael A. B. From Pappus to today. The history of a proof. (Not in MR)
- Dotto, Oclide José The foundations of infinitesimals. (Portuguese. English summary) 91f:03132
- (Engelbrechtsen, George) *see* New syllogistic, 91i:03013
- Fatier, N. I. Aristotle's modality and von Wright's predication principle. (Russian) (see 91e:03005)
- (Feinberg, E. L.) *see* Yaglom, I. M., (Not in MR)
- Flor, Peter Zu einer Anwendung der Psychoanalyse auf die mathematischen Grundlagenforschung. [On an application of psychoanalysis to mathematical basic research] (Not in MR)
- Fomenko, A. T. ★ Статистическая хронология. (Russian) [Statistical chronology] 91m:92057
- Greenough, H. Paul Cryptanalysis of the uncaged Hagelin. 91a:94023
- Heinemann, Gottfried ★ Natura desiderata. (German) (Not in MR)
- Hemmer, Harro Die vermaledeite Abstraktheit der Mathematik. Versuch einer Ursachen-ermittlung. [The cursed abstraction of mathematics. Attempt at finding causes] (see 91k:00033)
- Hirst, A. E. Blending cones and planes by using cyclides of Dupin. 91d:53006
- Jacob, Cains On a mechanical meaning of Ptolemy, Möbius, Neuberg and Pompeii theorems. 91c:51030
- Kenney, Emelie On the possibility of mathematical revolutions. 91i:00008
- Markin, V. I. Formalization of non-Aristotelian syllogistics. 91g:03016
- Morgan, Mary S. ★ The history of econometric ideas. 91f:62175
- Nualart, David Martingales and their applications: a historical perspective. (Catalan) 91d:60105
- Öffenberg, G. N. Many-valued logic in statu nascendi. (Italian) 91g:03003
- Prigogine, Ilya The rediscovery of time. 91h:00014
- Riekstīns, E. ★ Naturālo skaitļu nosaukumi pasaules tautu valodās. (Latvian) [Names of natural numbers in the languages of the world's peoples] 91h:01003
- Rothman, Tony ★ Science à la mode. 91h:00002
- Saari, Donald G. A visit to the Newtonian *N*-body problem via elementary complex variables. 91d:70006
- Schröder, Eberhard M. ★ Kartenentwürfe der Erde. (German) [Map designs of the Earth] 91g:51002
- (Shiryayev, A. N.) *see* Fomenko, A. T., 91m:92057
- Simpson, Adrian P. The infidel is innocent. 91g:00035
- Singal, M. K. Some famous conjectures. I. (Not in MR)
- (Turovskaya, M. I.) *see* Yaglom, I. M., (Not in MR)
- Yaglom, I. M. ★ Современная культура и компьютеры. (Russian) [Contemporary culture and computers] (Not in MR)
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- New syllogistic ★ The new syllogistic. 91i:03013

## 03-XX Mathematical logic and foundations

### 03-00 General reference works (handbooks, dictionaries, bibliographies, etc.)

- Czarnota, Kazimierz (with Marciszewski, Witold; Marek, Wiktor; Pawlak, Zdzisław; Perzanowski, Jerzy; Poletylo, Mikołaj; Stanoš, Barbara; Stonert, Henryk; Tabin, Marek; Wójcicki, R.; Ziemba, Zdzisław) ★ Mala encyklopedia logiki. (Polish) [Small encyclopedia of logic] 91e:03001
- Marciszewski, Witold *see* Czarnota, Kazimierz; et al., 91e:03001
- Marek, Wiktor *see* Czarnota, Kazimierz; et al., 91e:03001
- Pawlak, Zdzisław *see* Czarnota, Kazimierz; et al., 91e:03001
- Perzanowski, Jerzy *see* Czarnota, Kazimierz; et al., 91e:03001
- Poletylo, Mikołaj *see* Czarnota, Kazimierz; et al., 91e:03001
- Stanoš, Barbara *see* Czarnota, Kazimierz; et al., 91e:03001
- Stonert, Henryk *see* Czarnota, Kazimierz; et al., 91e:03001
- Tabin, Marek *see* Czarnota, Kazimierz; et al., 91e:03001
- Wójcicki, R. *see* Czarnota, Kazimierz; et al., 91e:03001
- Ziemba, Zdzisław *see* Czarnota, Kazimierz; et al., 91e:03001

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#### Encyclopedia:

Logic *see* Czarnota, Kazimierz; et al., 91e:03001

#### Index:

- Ann. Pure Appl. Logic Master index to Volumes 41–50. (Not in MR)
- J. Symbolic Logic Cumulative index: Volumes 27–55, 1962–1990. 91i:03001

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- Dubois, Didier (with Prade, Henri M.) Recent literature. 91g:00004
- Prade, Henri M. *see* Dubois, Didier, 91g:00004
- (Sessa, Salvatore) *see* Dubois, Didier, 91g:00004

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#### Bibliography:

Fuzzy sets and systems *see* Dubois, Didier, 91g:00004

#### Index:

Hist. Philos. Logic Cumulative indexes: Volumes 1 to 10, 1980 to 1989. 91g:00006

### 03-01 Instructional exposition (textbooks, tutorial papers, etc.)

- (Adrianova, M. A.) *see* Ershov, Yu. L., 91h:03002
- Albu, Adrian C. ★ Introducere în fundamentele matematicii. Partea I. (Romanian) [Introduction to the foundations of mathematics. Part I] 91f:03001
- Carnielli, Walter A. *see* Epstein, Richard L., 91h:03001
- Epstein, Richard L. (with Carnielli, Walter A.) ★ Computability: computable functions, logic, and the foundations of mathematics. 91h:03001
- Ershov, Yu. L. (with Palyutin, E. A.) ★ Логика математика. (Spanish) [Mathematical logic] 91h:03002
- Martin, Norman M. ★ Systems of logic. 91c:03001
- de Oliveira, A. J. Franco The advent of nonstandard mathematics. (Portuguese. English summary) 91e:03002
- Palyutin, E. A. *see* Ershov, Yu. L., 91h:03002
- Reitman, Judith ★ Introduction to modern set theory. 91h:03003
- Tennant, Neil ★ Natural logic. 91h:03004

Items with secondary classifications in 03-01

- (Carnielli, Walter A.) *see* Epstein, Richard L., 91h:03001
- Chan, Alvin (with Mourad, K. J.) Theoretical computers and Diophantine equations. (Not in MR)
- Chang, Chen Chung (with Keisler, H. Jerome) ★ Model theory. 91c:03026
- (D'Ottaviano, Itala M. L.) *see* Epstein, Richard L., 91e:03015
- Epstein, Richard L. ★ The semantic foundations of logic. Vol. 1. 91e:03015
- Keisler, H. Jerome *see* Chang, Chen Chung, 91c:03026
- (Krajewski, Stanisław) *see* Epstein, Richard L., 91e:03015
- La, Zhong Wan ★ Mathematical logic for computer science. 91k:68001
- (Maddux, Roger D.) *see* Epstein, Richard L., 91e:03015
- Mourad, K. J. *see* Chan, Alvin, (Not in MR)
- Pohlers, Wolfram ★ Proof theory. 91h:03078

### 03-02 Research exposition (monographs, survey articles)

- Cantone, Domenico (with Ferro, Alfredo; Omodeo, Eugenio) ★ Computable set theory. Vol. 1. 91i:03002
- Ferro, Alfredo *see* Cantone, Domenico; et al., 91i:03002
- Hodges, Wilfrid The present aims of model theory. 91e:03003
- Omodeo, Eugenio *see* Cantone, Domenico; et al., 91i:03002
- Saffra, N. M. ★ Логический анализ понятия количества. (Russian) [Logical analysis of the concept of quantity] 91k:03001
- (Schwartz, Jacob T.) *see* Cantone, Domenico; et al., 91i:03002

Items with secondary classifications in 03-02

- Jensen, Christian U. (with Lenzing, Helmut) ★ Model-theoretic algebra with particular emphasis on fields, rings, modules. 91m:03038
- Lenzing, Helmut *see* Jensen, Christian U., 91m:03038
- (Nesin, Ali) *see* Model theory of groups, 91a:03077
- (Pillay, Anand) *see* Model theory of groups, 91a:03077
- Shelah, Saharon ★ Classification theory and the number of nonisomorphic models. 91k:03085

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Model theory of groups ★ The model theory of groups. 91a:03077

Notre Dame, IN ★ The model theory of groups. 91a:03077

#### Seminars:

Stable Group ★ The model theory of groups. 91a:03077

### 03-03 Historical (must also be assigned at least one classification number from Section 01)

- Anderson, C. Anthony *see* Savage, C. Wade, (91i:03006)
- Aristotle ★ Prior analytics. 91g:03001
- Bertagna, Mario Buridan and implications. (Italian) 91g:03002
- Biryukova, L. G. The first attempt at a constructive approach in mathematical logic. (Russian) 91f:03002
- Brodskii, I. N. Aristotle's assertoric syllogistics represented in the form of a calculus of relative modalities. (Russian) (see 91e:03005)
- (Buridan, Jean) *see* Bertagna, Mario, 91g:03002
- Burkhardt, Hans (with Degen, Wolfgang) Mereology in Leibniz's logic and philosophy. 91f:03003
- Byrd, Michael Russell, logicism, and the choice of logical constants. 91a:03001
- (Carnap, Rudolf) *see* Sauer, Werner, (91e:00038)
- Castañeda, Héctor-Neri Leibniz's complete propositional logic. 91i:03003
- Degen, Wolfgang *see* Burkhardt, Hans, 91f:03003
- (De Morgan, Augustus) *see* Swiggart, Peter, (91i:03013)
- Dipert, Randall R. Individuals and extensional logic in Schröder's *Vorlesungen über die Algebra der Logik*. 91k:03002
- Fedorov, B. I. The consequence relation as a methodological problem of B. Bolzano's logic. (Russian) (see 91e:03005)

- Feferman, Solomon Turing in the land of  $O(z)$ . (see 91b:03004)  
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 (Russell, Bertrand) *see* Savage, C. Wade, (91i:03006) and Pears, David, (91i:03006)  
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 Truettstra, A. S. On the early history of intuitionistic logic. 91m:03001  
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- Kostyukov, L. V. Logically closed classes of relations in the arithmetic of the sequence of integers. (Russian) (see **91k:00013**)
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- Chang, Chen Chung (with Keisler, H. Jerome) ★ Model theory. 91c:03026
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- Jarzembski, Grzegorz Categorical characterization of universally axiomatizable classes of finitary relational systems. 91j:03051

- Keisler, H. Jerome *see* Chang, Chen Chung, 91c:03026  
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- (Ambos-Spies, Klaus) *see* Recursion theory week, 91e:03007  
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- Arikawa, Setsuo (with Shinohara, Takeshi; Yamamoto, Akihiro) Elementary formal system as a unifying framework for language learning. (Not in MR)  
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### 03D25 Recursively enumerable sets and degrees

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- Sorbi, Andrea On some filters and ideals of the Medvedev lattice. 91k:03113  
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- Arslanov, M. M. Completeness in the arithmetical hierarchy, and fixed points. 91g:03092  
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 Cutello, Vincenzo *see* Cantone, Domenico; et al., (91g:03006)  
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 — Unification in permutative equational theories is undecidable [MR 91f:03091]. (see 91f:03006)  
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- Items with secondary classifications in 03D35
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### 03D40 Word problems, etc. [see also 06B25, 08A50, 20F10]

- Cămpăanu, Cezar Post's correspondence problem. A new proof. 91c:03047  
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- Items with secondary classifications in 03D40
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- Cieslak, Randall A. (with Varaiya, Pravin P.) Undecidability results for deterministic communicating sequential processes. 91f:68049
- Fülp, Zoltán (with Vágölygi, Sándor) The emptiness problem is undecidable for domains of partial monadic 2-modular tree transformations. 91k:03098
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- Kolyada, K. V. Relatively universal regular mappings. (Russian) (see 91k:00013)
- Narendran, Paliath It is decidable whether a monadic Thue system is canonical over a regular set. 91m:68114
- Nipkow, Tobias Combining matching algorithms: the regular case. (see 91f:68006)
- Otto, Friedrich Restrictions of congruences generated by finite canonical string-rewriting systems. (see 91f:68006)
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- Unification in permutative equational theories is undecidable [MR 91f:03091]. (see 91j:68006)
- Segal, Dan Decidable properties of polycyclic groups. 91h:20050
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- Varaiya, Pravin P. see Cieslak, Randall A., 91b:68049

### 03D45 Theory of numerations, effectively presented structures [see also 03C57]

- Ash, C. J. Labelling systems and r.e. structures. 91g:03090
- Beigel, Richard (with Gasarch, William I.) On the complexity of finding the chromatic number of a recursive graph. I. The bounded case. 91b:03076
- (with Gasarch, William I.) On the complexity of finding the chromatic number of a recursive graph. II. The unbounded case. 91f:03093
- Downey, Rodney G. (with Moses, Michael F.) Recursive linear orders with incomplete successivities. 91k:03115
- Fedoryaev, S. T. Structures of algebraic reducibility of positive numerations. (Russian) 91k:03116
- Gasarch, William I. see Beigel, Richard, 91b:03076 and 91f:03093
- Grigorieff, Serge Every recursive linear ordering has a copy in DTIME-SPACE( $n, \log(n)$ ). 91a:03093
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- Selivanov, V. L. Applications of precomplete numerations to tt-degrees and index sets. 91j:03060
- Skandalis, Kostas Nonrecursiveness of the operations on real numbers. 91m:03046
- Soskov, Ivan N. see Soskova, Alexandra A., 91k:03117
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#### Items with secondary classifications in 03D45

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- Dobritsa, V. P. Computable classes of constructive models with unlimited equivalent indexations. 91f:03070
- Downey, Rodney G. Correction to: "Undecidability of  $L(F_\infty)$  and other lattices of r.e. substructures" [Ann. Pure Appl. Logic 32 (1986), no. 1, 17–26; MR 88b:03064]. 91g:03089
- Istrate, Gabriel On the topological size of the set of Boolean-valued partial recursive functions. (Not in MR)
- Kasymov, N. Kh. Homomorphisms of positive models and recursively enumerable universal definitions. (Russian) 91k:03089
- Knight, Julia F. Constructions by transfinitely many workers. 91k:03114
- Lombardi, Henri Calculabilité dans les structures algébriques dénombrables. (English summary) [Computability in countable algebraic structures] 91g:03084
- Morozov, A. S. On theories of classes of groups of recursive permutations. (Russian) 91c:03038
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- Odintsov, S. P. (with Selivanov, V. L.) The arithmetical hierarchy and ideals of enumerated Boolean algebras. 91f:03071
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- Hay, Louise see Beigel, Richard; et al., 91d:03016
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- Castro, Juan Luis (with Cucker, Felipe) Nondeterministic  $\omega$ -computations and the analytical hierarchy. 91g:03081
- Cote, Peter G. The metamathematics of Fraïssé's order type conjecture. 91i:03109
- Cucker, Felipe see Castro, Juan Luis, 91g:03081
- Hemachandra, Lane A. The strong exponential hierarchy collapses. 91d:68035
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### 03D60 Recursion theory on ordinals, admissible sets, etc.

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- Sacks, Gerald E. (with Slaman, Theodore A.) Generalized hyperarithmetical theory. 91h:03078
- Slaman, Theodore A. see Sacks, Gerald E., 91h:03078

#### Items with secondary classifications in 03D60

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- Michaux, Christian Une remarque à propos des machines sur  $\mathbb{R}$  introduites par Blum, Shub et Smale. (English summary) [A remark about the machines over  $\mathbb{R}$  introduced by Blum, Shub and Smale] 91g:03120

### 03D65 Higher-type and set recursion theory

- Belyakin, N. V. Iterated Kleene computability. 91f:03096
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#### Items with secondary classifications in 03D65

- Goerdt, Andreas Characterizing complexity classes by general recursive definitions in higher types. 91d:68032
- Longo, Giuseppe<sup>1</sup> On Church's formal theory of functions and functionals. The  $\lambda$ -calculus: connections to higher type recursion theory, proof theory, category theory. 91h:03022
- (with Moggi, Eugenio) A category-theoretic characterization of functional completeness. 91g:03036
- Moggi, Eugenio see Longo, Giuseppe<sup>1</sup>, 91g:03036
- Robinson, Edmund (with Rosolini, Giuseppe) Colimit completions and the effective topos. 91f:03130
- Rosolini, Giuseppe see Robinson, Edmund, 91f:03130

### 03D70 Inductive definability

- Leivant, Daniel Inductive definitions over finite structures. 91k:03120
- McCorm, Gregory L. Parametrization over inductive relations of a bounded number of variables. 91m:03048

#### Items with secondary classifications in 03D70

- Moschovakis, Yiannis N. A mathematical modeling of pure, recursive algorithms. 91h:03063
- The formal language of recursion. 91h:03062
- Platek, Richard A. Making computers safe for the world: an introduction to proofs of programs. I. (see 91e:03006)
- Roorda, Dirk Elementary inductive definitions in HA: from strictly positive towards monotone. 91h:03083



## 03D75 Abstract and axiomatic recursion theory

- Mijoule, Richard. Une généralisation des ensembles énumérés. [A generalization of enumerated sets] 91f:03097
- Montagna, Franco (with Sorbi, Andrea). Creativeness and completeness in recursion categories of partial recursive operators. 91d:03017
- Moschovakis, Yiannis N. A mathematical modeling of pure, recursive algorithms. 91h:03063
- The formal language of recursion. 91h:03062
- Nikolova, S. K. Computability in sense of Moschovakis over multiple-valued abstract structures. 91i:03092
- Shepherdson, John C. Mechanisms for computing over arbitrary structures. (see 91h:03004)
- Skordev, Dimit'r. Some formal systems for the theory of iterative semicombinatory spaces. (Russian. English summary) 91j:03062
- Sorbi, Andrea. see Montagna, Franco, 91d:03017
- Soskov, Ivan N. On the computational power of the logic programs. 91m:03049
- Computability by means of effectively definable schemes and definability via enumerations. 91j:03063
- Soskova, Alexandra A. Computability on many-sorted partial structures. 91k:03121
- Valcenavicius, Rimantas. Inner-resolvent feasible sets. (Russian. English and Lithuanian summaries) (Not in MR)
- Necessary conditions for the existence of a universal function on a feasible set. (Russian. English and Lithuanian summaries) (Not in MR)
- Zaitsev, I. A. Least fixed points in preassociative combinatory algebras. 91k:03122

## Items with secondary classifications in 03D75

- Asperti, Andrea. Stability and computability in coherent domains. 91j:03030
- Chong, C. T. (with Mourad, K. J.). Positive solutions to Post's problem. 91i:03085
- McCorm, Gregory L. Parametrization over inductive relations of a bounded number of variables. 91m:03048
- Michaux, Christian. Ordered rings over which output sets are recursively enumerable sets. 91i:03073
- Mourad, K. J. see Chong, C. T., 91i:03085
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- A categorical approach to the theory of computation. 91f:03129
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- Román, Leopoldo. Cartesian categories with natural numbers object. 91a:18012
- see also Paré, Robert, 91j:18012
- Tucker, J. V. (with Wainer, S. S.; Zucker, J. I.). Provable computable functions on abstract data types. (see 91e:68004)
- Wainer, S. S. see Tucker, J. V.; et al., (91e:68004)
- Weihrauch, Klaus. Constructivity, computability, and computational complexity in analysis. 91h:03101
- Zucker, J. I. see Tucker, J. V.; et al., (91e:68004)

## 03D80 Applications of recursion theory

- Adleman, Leonard M. An abstract theory of computer viruses. 91f:03096
- Calude, Cristian (with Chijesca, Ion). Qualitative properties of P. Martin-Löf random sequences. (Italian summary) 91h:03064
- Chijesca, Ion. see Calude, Cristian, 91h:03064
- Items with secondary classifications in 03D80
- Anisimov, A. V. Recursive information converters. (Russian) 91h:68075
- Asarin, E. A. Individual random continuous functions. (see 91j:60003)
- Cantone, Domenico (with Ferro, Alfredo; Omodeo, Eugenio). \* Computable set theory. Vol. 1. 91i:03062
- Cieslak, Randall A. (with Varaiya, Pravin P.). Undecidability results for deterministic communicating sequential processes. 91f:68049
- Colson, Lefé. About primitive recursive algorithms. 91d:68077
- Denef, Jan (with Lipsitz, L.). Decision problems for differential equations. 91h:03074
- Ferro, Alfredo. see Cantone, Domenico; et al., 91i:03062
- Fulk, Mark A. (with Jain, Sanjay). Learning in the presence of inaccurate information. (see 91e:68014)
- Prudence and other conditions on formal language learning. 91f:68042
- Impagliazzo, Russell (with Rudich, Steven). Limits on the provable consequences of one-way permutations. 91f:54028
- Jain, Sanjay. see Fulk, Mark A., (91e:68014)
- Lewis, Alain A. A note on degrees of presentation of games as relational structures. 91e:90142
- Lipsitz, L. see Denef, Jan, 91h:03074
- Marongia, G. (with Tulipani, S.). On a conjecture of Bergstra and Tucker. 91f:68152
- Omodeo, Eugenio. see Cantone, Domenico; et al., 91i:03062
- Palmgren, Erik (with Stoltenberg-Hansen, Viggo). Domain interpretations of Martin-Löf's partial type theory. 91h:03015
- Rudich, Steven. see Impagliazzo, Russell, 91f:54028
- Rustem, Berc (with Velupillai, Kumaraswamy). Rationality, computability, and complexity. 91f:90015
- (Schwartz, Jacob T.). see Cantone, Domenico; et al., 91i:03062
- Stoltenberg-Hansen, Viggo. see Palmgren, Erik, 91h:03015
- Suppes, Patrick. Current directions in mathematical learning theory. 91k:92054
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- Varaiya, Pravin P. see Cieslak, Randall A., 91f:68049
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- V'yugin, V. V. Some estimates for nonstochastic sequences. (see 91j:60003)

## 03D99 None of the above, but in this section

- Asarin, E. A. Equivalence of the generic and chaotic properties of finite objects. (Russian) (Not in MR)

Gerla, Giangiacomo. Turing  $L$ -machines and recursive computability for  $L$ -maps. 91a:03095

## Items with secondary classifications in 03D99

- Pitts, Andrew M. (with Taylor, Paul). A note on Russell's paradox in locally Cartesian closed categories. 91k:03018
- Taylor, Paul. see Pitts, Andrew M., 91k:03018

## 03Exx Set theory [see also 04-XX]

## Items with secondary classifications in 03Exx

- Roitman, Judith. \* Introduction to modern set theory. 91h:03003

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- Axiomatic set theory and general recursion theory. \* Kōriteki shūgōron to ippan kinō kansū ron. (Japanese) [Axiomatic set theory and general recursion theory] 91h:03005
- Symposium:  
Axiomatic Set Theory and General Recursion Theory. \* Kōriteki shūgōron to ippan kinō kansū ron. (Japanese) [Axiomatic set theory and general recursion theory] 91h:03005

## 03E05 Combinatorial set theory [see also 04A20]

- Abraham, Uri. Free sets for commutative families of functions. 91a:03096
- Baumgartner, James E. Polarized partition relations and almost-disjoint functions. 91h:03079
- Remarks on partition ordinals. 91h:03080
- (with Larson, Jean A.). A diamond example of an ordinal graph with no infinite paths. 91h:03099
- Bergelson, Vitaly (with Hindman, Neil). Ultrafilters and multidimensional Ramsey theorems. 91f:03101
- Blass, Andreas. Applications of superperfect forcing and its relatives. 91h:03081
- (with Hindman, Neil). Sums of ultrafilters and the Rudin-Keisler and Rudin-Frolik orders. 91h:03093
- Infinitary combinatorics and modal logic. 91k:03123
- Carr, Donna M. (with Pelletier, Donald H.). Towards a structure theory for ideals on  $P_{\kappa}\lambda$ . 91h:03082
- (with Levinski, Jean-Pierre; Pelletier, Donald H.). On the existence of strongly normal ideals over  $P_{\kappa}\lambda$ . 91k:03124
- Ciesielski, Krzysztof.  $2^{2^{\kappa}}$  nonisomorphic short ordered commutative domains whose quotient fields are long. 91k:03125
- David, René. Some results on higher Suslin trees. 91h:03065
- Fremlin, D. H. (with Kunen, Kenneth). Essentially unbounded chains in compact sets. 91i:03094
- Goldstern, Martin (with Shelah, Saharon). Ramsey ultrafilters and the reaping number— $\text{Con}(\kappa < \mathfrak{u})$ . 91m:03050
- (with Judah, Haim I.; Shelah, Saharon). Saturated families. 91g:03093
- Hajnal, A. (with Juhász, I.; Weiss, William A. R.). Partitioning the pairs and triples of topological spaces. 91i:03095
- Hindman, Neil. see Bergelson, Vitaly, 91f:03101 and Blass, Andreas, 91i:03093
- Jech, Thomas (with Shelah, Saharon). Full reflection of stationary sets below  $\aleph_{\omega}$ . 91i:03096
- Judah, Haim I. Unbounded filters on  $\omega$ . 91i:03097
- see also Goldstern, Martin; et al., 91g:03093
- Juhász, I. see Hajnal, A.; et al., 91i:03095
- Just, Winfried (with Mathias, A. R. D.; Priky, Karel; Simon, Petr). On the existence of large  $p$ -ideals. 91g:03094
- Kunen, Kenneth. see Fremlin, D. H., 91i:03094
- Larson, Jean A. Martin's axiom and ordinal graphs: large independent sets or infinite paths. 91f:03100
- see also Baumgartner, James E., 91f:03099
- Leary, Christopher C. Patching ideal families on  $P_{\kappa}\lambda$ . 91j:03064
- Levinski, Jean-Pierre. see Carr, Donna M.; et al., 91k:03124
- Malykhin, V. I. see Zelenyuk, E. G., 91g:03096
- Mathias, A. R. D. see Just, Winfried; et al., 91g:03094
- Matsubara, Yo. Consistency of Menas' conjecture. 91e:03039
- Morgan, Charles. see Stanley, Lee; et al., 91g:03095
- Pelletier, Donald H. see Carr, Donna M., 91h:03082 and 91k:03124
- Priky, Karel. see Just, Winfried; et al., 91g:03094
- Shelah, Saharon. Strong negative partition above the continuum. 91h:03083
- see also Goldstern, Martin; et al., 91g:03093; Jech, Thomas, 91i:03096 and Goldstern, Martin, 91m:03050
- Simon, Petr. see Just, Winfried; et al., 91g:03094
- Stanley, Lee (with Velleman, Dan; Morgan, Charles).  $\omega_1\omega_1 \rightarrow (\omega_1\omega_1, 3)^2$  requires an inaccessible. 91g:03095
- Todorćević, Stevo. Two examples of Borel partially ordered sets with the countable chain condition. 91j:03065
- Velleman, Dan. see Stanley, Lee; et al., 91g:03095
- Weiss, William A. R. see Hajnal, A.; et al., 91i:03095
- Zelenyuk, E. G. (with Malykhin, V. I.). Bicoloring of Cartesian products. 91g:03096
- Zwicker, William S. A beginning for structural properties of ideals on  $P_{\kappa}\lambda$ . 91d:03018
- Items with secondary classifications in 03E05
- Butkovičová, Eva. A remark on incomparable ultrafilters in the Rudin-Keisler order. 91i:04004
- Donder, Hans-Dieter (with Levinski, Jean-Pierre). Some principles related to Chang's conjecture. 91h:03087
- Dordal, Peter Lars. Towers in  $(\omega)^{\omega}$  and  ${}^{\omega}\omega$ . 91h:03088
- Gitik, Moti (with Shelah, Saharon). Forcing with ideals and simple forcing notions. 91g:03104
- Hensle, J. M. Partition properties and Priky forcing on simple spaces. 91k:03132

- Hindman, Neil Ultrafilters and Ramsey theory—an update. 91b:54003
- Howard, Mark Applications of Fodor's lemma to Vaught's conjecture. 91e:03032
- Iwanik, Anzeim (with Mioduszewski, J.) Independence with respect to families of characters. 91d:43015
- Jackson, Stephen Craig A new proof of the strong partition relation on  $\omega_1$ . 91c:03045
- Just, Winfried (with Laflamme, Claude) Classifying sets of measure zero with respect to their open covers. 91a:28003
- Kalikow, Steven Sequences of reals to sequences of zeros and ones. 91d:04003
- Krawczyk, Adam (with Zakrzewski, Piotr) Extensions of measures invariant under countable groups of transformations. 91j:28010
- Laflamme, Claude Upward directedness of the Rudin-Keisler ordering of  $P$ -points. 91f:03106
- see also Just, Winfried, 91a:28003
- Levinski, Jean-Pierre see Donder, Hans-Dieter, 91b:03087
- Logunov, S. A. (with Malykhin, V. I.) Nowhere dense subsets of  $\mathbb{N}^*$  and types of ultrafilters. 91c:03043
- Louveau, Alain (with Saint-Raymond, Jean) On the quasi-ordering of Borel linear orders under embeddability. 91h:03067
- Malykhin, V. I. see Logunov, S. A., 91c:03043
- Mioduszewski, J. see Iwanik, Anzeim, 91d:43015
- Nyikos, Peter J. On first countable, countably compact spaces. II. Remainders in a van Douwen construction and  $P$ -ideals. 91j:54066
- Roitman, Judith  $\omega_1$  can be a nontrivial automorphism group. 91j:03068
- Saint-Raymond, Jean see Louveau, Alain, 91h:03067
- Schindwein, Chaz Special nonspecial  $\mathbb{N}_1$ -trees. 91i:03101
- Shelah, Saharon Consistency of positive partition theorems for graphs and models. 91a:03102
- "Gap 1" two-cardinal principles and the omitting types theorem for  $\mathcal{L}(Q)$ . 91a:03083
- The number of pairwise non-elementarily-embeddable models. 91h:03042
- see also Gitik, Moti, 91g:03104
- Soukup, Lajos A nonspecial  $\omega_2$ -tree with special  $\omega_1$ -subtrees. 91i:03103
- Taylor, Alan D. Separating collections. 91d:04005
- Watson, W. Stephen A construction of a Dowder space. 91b:54045
- Zafrany, Samy On analytic filters and prefilters. 91c:03042
- Zakrzewski, Piotr The existence of universal invariant measures on large sets. 91f:04006
- Paradoxical decompositions and invariant measures. 91f:04007
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- Zhao, Xi Shun The consistencies of MA, SOCA, OCA, and ISA with  $\text{KT}(\omega_2)$ . 91k:03131
- $(2^{\aleph_1})^*$ -trees in the model  $C$  (Chinese) (Not in MR)

### 03E10 Ordinal and cardinal numbers [see also 04A10]

- Jech, Thomas (with Shelah, Saharon) On a conjecture of Tarski on products of cardinals. 91j:03066
- Pfeiffer, Washek F. (with Prikrý, Karel) A characterization of cardinals  $\kappa$  such that  $2^\lambda = 2^\kappa$  whenever  $\kappa \leq \lambda < 2^\kappa$ . 91a:03097
- Prikrý, Karel see Pfeiffer, Washek F., 91a:03097
- Shelah, Saharon see Jech, Thomas, 91j:03066
- Items with secondary classifications in 03E10
- Bagai, Rajiv (with Bezem, Marc; van Emden, M. H.) On downward closure ordinals of logic programs. 91i:68112
- Baumgartner, James E. Remarks on partition ordinals. 91b:03080
- Bezem, Marc see Bagai, Rajiv; et al., 91i:68112
- van Emden, M. H. see Bagai, Rajiv; et al., 91i:68112
- Roguski, Stanisław A proper class of pairwise incomparable cardinals. 91g:03102

### 03E15 Descriptive set theory [see also 04A15, 28A05, 54H05]

- Dubose, Derrick Albert The equivalence of determinacy and iterated sharps. 91b:03066
- Dyck, Stephen Some applications of positive formulas in descriptive set theory and logic. 91b:03064
- Godefroy, Gilles (with Louveau, Alain) Axioms of determinacy and biorthogonal systems. 91k:03126
- Judah, Haim I. (with Shelah, Saharon) The Kunen-Miller chart (Lebesgue measure, the Baire property, Laver reals and preservation theorems for forcing). 91g:03097
- Keisler, H. Jerome (with Kunen, Kenneth; Miller, Arnold W.; Leth, Steven) Descriptive set theory over hyperfinite sets. 91c:03040
- Kharazishvili, A. B. Martin's axiom and  $\Gamma$ -selectors. (Russian. English and Georgian summaries) 91k:03127
- Kunen, Kenneth see Keisler, H. Jerome; et al., 91c:03040
- Leth, Steven see Keisler, H. Jerome; et al., 91c:03040
- Louveau, Alain (with Saint-Raymond, Jean) On the quasi-ordering of Borel linear orders under embeddability. 91h:03067
- see also Godefroy, Gilles, 91k:03126
- Miller, Arnold W. see Keisler, H. Jerome; et al., 91c:03040
- Repický, M. Porous sets and additivity of Lebesgue measure. 91a:03098
- Saint-Raymond, Jean see Louveau, Alain, 91h:03067
- Seredyński, Witold Some operations related with translation. 91b:03085
- Shelah, Saharon see Judah, Haim I., 91g:03097
- Shipman, Joseph Cardinal conditions for strong Fubini theorems. 91c:03041
- Zafrany, Samy On analytic filters and prefilters. 91c:03042

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- Bagemihl, F. Throwing a dart at Freiling's argument against the continuum hypothesis. 91g:04002
- see also Freiling, Chris, 91k:03134
- Dehornoy, Patrick La détermination projective (d'après Martin, Steel et Woodin). [Projective determinacy (after Martin, Steel and Woodin)] 91g:03108
- van Engelen, Fons On Borel groups. 91m:54047

- Foreman, Matthew Amenable group actions on the integers; an independence result. 91f:03104
- Freiling, Chris (with Simms, John C.) A three-dart response to an argument of Bagemihl. A comment on: "Throwing a dart at Freiling's argument against the continuum hypothesis" [Real Anal. Exchange 15 (1989/1990), no. 1, 342–345; MR 91g:04002] by F. Bagemihl. 91k:03134
- Fremlin, D. H. A new notion of  $\kappa$ -Souslin operation. 91f:04003
- Friedman, Harvey M. (with Stanley, Lee) A Borel reducibility theory for classes of countable structures. 91f:03062
- Harrington, L. A. (with Kechris, A. S.; Louveau, Alain) A Glimm-Effros dichotomy for Borel equivalence relations. 91h:28023
- Jackson, Stephen Craig Partition properties and well-ordered sequences. 91k:03136
- A new proof of the strong partition relation on  $\omega_1$ . 91c:03045
- Judah, Haim I. Unbounded filters on  $\omega$ . 91i:03097
- (with Shelah, Saharon; Woodin, W. Hugh) The Borel conjecture. 91m:03052
- Kalikow, Steven Sequences of reals to sequences of zeros and ones. 91d:04003
- Kanovei, V. G. see Uspenskii, V. A., 91h:01034
- Kechris, A. S. (with Louveau, Alain; Tardivel, V.) The class of synthesizable pseudomeasures. 91h:43005
- see also Harrington, L. A.; et al., 91h:28023
- Kharazishvili, A. B. Some problems connected with the Lebesgue measure and the Baire property. (Russian. English and Georgian summaries) 91k:28003
- Komjáth, Péter Ordered families of Baire-2-functions. 91d:26007
- A second category set with only first category functions. 91j:03067
- Louveau, Alain see Harrington, L. A.; et al., 91h:28023 and Kechris, A. S.; et al., 91h:43005
- Maddy, Penelope A problem in the foundations of set theory. 91m:03003
- Maitra, A. (with Purves, R.; Sudderth, W.) Leavable gambling problems with unbounded utilities. 91g:60054
- Pawlikowski, Janusz Finite support iteration and strong measure zero sets. 91h:03071
- Small subset of the plane which almost contains almost all Borel functions. 91d:28004
- Purves, R. see Maitra, A.; et al., 91g:60054
- Sacks, Gerald E. (with Slaman, Theodore A.) Generalized hyperarithmetical theory. 91h:03078
- Shelah, Saharon see Judah, Haim I.; et al., 91m:03052
- Simms, John C. see Freiling, Chris, 91k:03134
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- Sudderth, W. see Maitra, A.; et al., 91g:60054
- (Suslin, M. Ya.) see Uspenskii, V. A., 91h:01034
- Tardivel, V. see Kechris, A. S.; et al., 91h:43005
- Todorćević, Stevo Two examples of Borel partially ordered sets with the countable chain condition. 91j:03065
- Uspenskii, V. A. (with Kanovei, V. G.) M. Ya. Suslin's contribution to set-theoretic mathematics. (Russian) 91h:01034
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- Zinsmeister, Michel Les dérivations analytiques. [Analytic differentiations] 91e:54090

### 03E25 Axiom of choice and related propositions [see also 04A25]

- Abian, Alexander (with Amin, Wael A.) An equivalent of the axiom of choice in finite models of the powerset axiom. 91g:03098
- Amin, Wael A. see Abian, Alexander, 91g:03098
- Banaschewski, Bernhard (with Moore, Gregory H.) The dual Cantor-Bernstein theorem and the partition principle. 91k:03128
- Blass, Andreas Axioms of choice for finite sets. 91a:03099
- Brunner, Norbert Mathematische Intuition, Kontinuumshypothese und Auswahlaxiom. (English summary) [Mathematical intuition, continuum hypothesis and axiom of choice] 91b:03066
- The Fraenkel-Mostowski method, revisited. 91g:03099
- Cohen, Robert H. Two hypergraph theorems equivalent to BPI. 91m:03051
- Haddad, Labib (with Morillon, Marianne) L'axiome de normalité pour les espaces totalement ordonnés. (English summary) [The normality axiom for totally ordered spaces] 91f:03102
- Moore, Gregory H. see Banaschewski, Bernhard, 91k:03128
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- Banaschewski, Bernhard On proving the Tychonoff product theorem. 91j:54011
- Brunner, Norbert Set-mappings on Dedekind sets. 91b:04005
- Guzicki, Wojciech Pairwise incompatible generic families. 91c:03032
- Howard, Paul E. (with Yorke, Mary F.) Definitions of finite. 91h:03068
- Definitions of compact. 91g:04001
- Roguski, Stanisław A proper class of pairwise incomparable cardinals. 91g:03102
- Shannon, Gary P. Provable forms of Martin's axiom. 91g:03107
- Yorke, Mary F. see Howard, Paul E., 91h:03068

### 03E30 Axiomatics of classical set theory and its fragments

- Alarcón Athens, Winston Study of a nonarithmetic definition of set finiteness. (Spanish. English summary) 91g:03100
- Cantone, Domenico A survey of computable set theory. 91g:03101
- Heidema, Johannes An axiom schema of comprehension of Zermelo-Fraenkel-Skolem set theory. 91d:03019
- Hellman, Geoffrey Toward a modal-structural interpretation of set theory. 91k:03129
- Howard, Paul E. (with Yorke, Mary F.) Definitions of finite. 91h:03068
- Kim, Sang Mun<sup>2</sup> The length of wellorderings in the impredicative extension of von Neumann-Bernays-Gödel class theory. 91f:03103
- Kuznetsov, Vladimir Aiferevich Set theory from the point of view of the Gentzen-type formal system  $G^+$ . (Russian) 91e:03050

- Millicci, C. (with Rachin, N.) *Théorie formelle des ensembles finis. IV. (Romanian summary) [Formal theory of finite sets. IV]* (see 91e:00034)
- Pollard, Stephen A strengthening of Scott's  $ZF^*$  result. 91h:03069
- Rachin, N. see Millicci, C., (91e:00034)
- Yorke, Mary F. see Howard, Paul E., 91h:03068
- Zhao, Xi Shun A consistent result of the system  $Z +$  the replacement axiom schema of  $Z_{\omega_1}$ -formulas. (Not in MR)

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- Booth, David Hereditarily finite Finsler sets. 91g:03111
- Brunner, Norbert The Fraenkel-Mostowski method, revisited. 91g:03099
- Cantone, Domenico (with Cutello, Vincenzo; Policriti, Alberto) Decidability results for classes of purely universal formulae and quantifier elimination in set theory. 91j:03007
- (with Ferro, Alfredo; Omodeo, Eugenio)  $\star$  Computable set theory. Vol. 1. 91i:03002
- (with Cutello, Vincenzo; Ferro, Alfredo) Decision procedures for elementary sublanguages of set theory. XIV. Three languages involving rank related constructs. 91h:03022
- (with Cutello, Vincenzo) Decision procedures for elementary sublanguages of set theory. XV. Multilevel syllogistic extended by the predicate finite and the operators singleton and  $\text{Pred}_\infty$ . 91k:03024
- Čirić, D. (with Mijajlović, Ž.) Topologies on classes. 91k:54003
- Cutello, Vincenzo see Cantone, Domenico; et al., 91h:03022; 91j:03007 and 91k:03024
- Ferro, Alfredo (with Sorace, Giuseppe; Schwartz, Jacob T.) A note on extending decision algorithms by stable predicates. 91j:03008
- see also Cantone, Domenico; et al., 91h:03022 and 91i:03002
- Forti, M. (with Hinnion, R.) The consistency problem for positive comprehension principles. 91d:03020
- Hinnion, R. see Forti, M., 91d:03020
- Mijajlović, Ž. see Čirić, D., 91k:54003
- Mints, Grigori Efremovich The epsilon-substitution method for the theory of hereditarily finite sets. (Russian. English and Estonian summaries) 91k:03146
- Miyama, Tōru The method of cut elimination. IV. (Japanese. English summary) 91k:03137
- Omodeo, Eugenio see Cantone, Domenico; et al., 91i:03002
- Policriti, Alberto Completeness and decidability of the deductibility problem for some class of formulas of set theory. 91h:03024
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- Schwartz, Jacob T. see Ferro, Alfredo; et al., 91j:03008 and Cantone, Domenico; et al., 91i:03002
- Sorace, Giuseppe see Ferro, Alfredo; et al., 91j:03008
- Tetrashvili, M. R. Decision complexity of the theory MLSC. (Russian. English and Georgian summaries) 91a:03018
- Computational complexity of the decidability of a class of formulas in unquantified set theory with the power set operator. (Russian. English and Georgian summaries) 91g:03022

#### 03E35 Consistency and independence results

- Apter, Arthur W. Successors of singular cardinals and measurability revisited. 91i:03098
- Doeder, Hans-Dieter (with Levinski, Jean-Pierre) Some principles related to Chang's conjecture. 91h:03087
- Dordal, Peter Lars Towers in  $\omega_1^{\text{ck}}$  and  $\omega$ . 91h:03088
- van Douwen, Eric K. The automorphism group of  $\mathcal{P}(\omega)/\text{fin}$  need not be simple. 91a:03100
- Foreman, Matthew Amenable group actions on the integers; an independence result. 91f:03104
- (with Woodin, W. Hugh) The generalized continuum hypothesis can fail everywhere. 91k:03130
- Forti, M. (with Hinnion, R.) The consistency problem for positive comprehension principles. 91d:03020
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- Rasiowa, Helena *see* Nguyen Cat Ho, 91j:06028
- Reischer, Corina (with Simovici, Dan A.) An iterative characterization of Post algebras (extended abstract). (see 91h:58002)
- Rosenberg, Ivo G. *see* Miyakawa, Masahiro; et al., 91k:03062
- Shmerko, V. P. *see* Zaitseva, E. N.; et al., 91a:94046
- Simovici, Dan A. *see* Reischer, Corina, (91h:58002)
- Stojmenović, Ivan *see* Miyakawa, Masahiro; et al., 91k:03062
- Yanushkevich, S. N. *see* Zaitseva, E. N.; et al., 91a:94046
- Yaqub, Fawzi M. Molecules of Post algebras. 91b:06021
- Zaitseva, E. N. (with Yanushkevich, S. N.; Shmerko, V. P.) Generalization of Boolean differentiation and integration for functions of many-valued logic. (Russian) 91a:94046

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- Bellissima, Fabio Atoms of tense algebras. 91k:03149
- Cattaneo, Gianpiero (with Nisticò, Giuseppe) Brouwer-Zadeh posets and three-valued Lukasiewicz posets. 91b:03105
- Milic, C. (with Rachin, N.) Sur le système formel d'une B-algèbre. [On the formal system of B-algebra] 91b:03106
- Montagna, Franco The elementary theory of Lindenbaum fixed point algebras is hyperarithmetical. 91k:03150
- Muravitskii, A. Ya. Magari and  $\delta$ -pseudo-Boolean algebras. 91m:03065
- Nisticò, Giuseppe *see* Cattaneo, Gianpiero, 91b:03105
- Pagliani, Piero Remarks on special lattices and related constructive logics with strong negation. 91j:03079
- Pan, Yin (with Wu, Wang Ming) Medium algebras. (Chinese summary) 91k:03151
- Rachin, N. *see* Milic, C., 91b:03106
- Ratsa, M. F. ★ Итеративные цепные классы псевдобулевых функций. (Russian) [Iterative chain classes of pseudo-Boolean functions] 91g:03128
- Romov, B. A. On the problem of completeness in the algebra of partial functions of finite-valued logic. 91f:03127
- Tembrowski, Bronisław  $B$ -varieties with normal free algebras. 91i:03125
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- Adams, M. E. (with Beazer, R.) The intersection of principal congruences on De Morgan algebras. 91h:06025
- Ahmad, B. On classification of BCH-algebras. 91h:06035
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- Beazer, R. *see* Adams, M. E., 91h:06025
- Bergman, Clifford (with McKenzie, Ralph N.) Minimal varieties and quasivarieties. 91i:08013
- Bhatti, Shaban Ali (with Chaudhry, Muhammad Anwar; Ahmad, B.) On classification of BCI-algebras. 91a:06021
- (with Chaudhry, Muhammad Anwar) Ideals in BCI-algebras. 91e:06006
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- Casari, Ettore Comparative logics and abelian  $I$ -groups. 91g:03051
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- *see also* Bhatti, Shaban Ali; et al., 91a:06021; 91c:06032; 91e:06006; Siddiqui, Akhlaq A., 91f:06018 and Bhatti, Shaban Ali, 91h:06036

- Chen, Zhao Mu Chain conditions and composition series of well-BCI-algebras. (Chinese. English summary) 91b:06033
- Deeba, E. Y. (with Thabeem, A. B.) On filters of BCK-algebras. 91g:06018
- Dolek, K. V. Duality between modal algebras and neighbourhood frames. 91f:03030
- Dudek, Wiesław A. (with Thomys, Janus) On decompositions of BCH-algebras. 91j:06040
- Goel, Sudhir K. An introduction to injective and projective BCK-algebras. (Not in MR)
- Huo, C. S. Closed ideals and  $p$ -semisimple BCI-algebras. 91j:06041
- Hu, Qing Ping (with Li, Hai Liang; Wang, Yun Xia; Shen, Zun Huan) Some notes on the unions of BCI algebras and BCH algebras. (Chinese. English summary) (Not in MR)
- (Huang, Wan Hui) see Zhang, Xiao Hong. (Not in MR)
- Jiang, Hao Noncommutative positive implicative BCK-algebras. (Chinese. English summary) 91a:06022
- Jiao, Ju Hui Generated ideals of BCI-algebras. (Chinese. English summary) (Not in MR)
- Kondo, Michiro Some properties of left maps in BCK-algebras. (Not in MR)
- Kozen, Dexter On Kleene algebras and closed semirings. 91m:68130
- Li, Hai Liang see Hu, Qing Ping; et al. (Not in MR)
- Li, Yu Ling A discussion on the component parts of finite BCI-algebras. (Chinese. English summary) (Not in MR)
- MacDonald, John L. (with Stone, Arthur L.) The natural number bialgebra. (French summary) 91c:18006
- Malai, V. P. see Ratsa, M. F., 91b:03045
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- Meng, Jie The structure of finite BCK-chains. (Chinese. English summary) 91b:06034
- Decompositions of dual ideals in BCK-algebras. (Chinese. English summary) 91b:06037
- Fuzzy BCK-algebras are BCK-algebras. (Chinese) (Not in MR)
- Meskh, V. Yu. Two remarks on Heyting algebras with involution. (Russian) 91k:06014
- Mundici, Daniele  $K_0 \text{ AFC}^* / \Gamma \text{ MV}$ : a brief outline. (see 91f:03008)
- Palasiński, Marek The answer to Dziobiak's question. 91i:08015
- Pomykala, Jacek (with Pomykala, Janusz A.) The Stone algebra of rough sets. (Russian summary) 91m:04004
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- Ratsa, M. F. (with Malai, V. P.) A chain class of sectorial functions of the logic of the first Jaskowski matrix. (Russian) 91b:03045
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- Sendlewski, Andrzej Nelson algebras through Heyting ones. I. 91k:06015
- Shen, Zun Huan see Hu, Qing Ping; et al. (Not in MR)
- Sidiqi, Akhlaq A. (with Chaudry, Muhammad Anwar) On isomorphism theorems in BCI-algebras. 91f:06018
- Sommers, Fred Predication in the logic terms. 91b:03021
- Stone, Arthur L. see MacDonald, John L., 91c:18006
- Suzuki, Nobu-Yuki An algebraic approach to intuitionistic modal logics in connection with intermediate predicate logics. 91f:03035
- Tan, Zhi Song Solvability of well BCI-algebras. (Chinese. English summary) 91b:06038
- Thabeem, A. B. see Deeba, E. Y., 91g:06018
- Thomys, Janus see Dudek, Wiesław A., 91j:06040
- Wang, Hua Xiong Injective in BCI-algebras. 91d:06022
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- Yatani, Hiroshi Products of varieties of BCK-algebras. 91j:06042
- Reduction of types of quasi-commutative BCK-algebras. 91k:06022
- Zhang, Qun Some endomorphisms of BCI-algebras. (Not in MR)
- Zhang, Xiao Hong Comment: "Fuzzy BCK-algebras" [Math. Appl. 3 (1990), no. 1, 98–99] by W. H. Huang. (Chinese) (Not in MR)
- Zhao, Xian Zhong On implicative BCK-algebras. (Chinese. English summary) 91c:06033

### 03G30 Categorical logic, topoi [see also 18B25]

- Bainbridge, E. S. (with Freyd, Peter J.; Seedorv, A.; Scott, Philip J.) Functorial polymorphism. 91g:03129a
- (with Freyd, Peter J.; Seedorv, A.; Scott, Philip J.) Corrigendum: "Functorial polymorphism". 91g:03129b
- Blass, Andreas Classifying topoi and the axiom of infinity. 91a:03117
- Cockett, J. R. B. List-arithmetic distributive categories: locoi. 91k:03152
- Carlen, Pierre-Louis Alpha-conversion, conditions on variables and categorical logic. 91k:03153
- Dubuc, Eduardo J. Topoi and (multisorted) higher-order intuitionistic logic. 91b:03090
- Freyd, Peter J. see Bainbridge, E. S.; et al., 91g:03129a and 91g:03129b
- Karpenko, A. S. Truth values. What are they? (Russian) 91k:03154
- Lambek, J. On the sheaf of possible worlds. 91f:03128
- On some connections between logic and category theory. 91f:03126
- Leisner, Bruno Some higher-order properties of a natural number object in a topos. 91i:03127
- Lyubetskii, V. A. Estimates and sheaves. Some problems in nonstandard analysis. 91k:03155
- Makkai, Michael (with Paré, Robert)  $\star$  Accessible categories: the foundations of categorical model theory. 91a:03118
- Mulry, Philip S. A categorical approach to the theory of computation. 91f:03129
- Categorical fixed point semantics. 91c:03049
- Obtulowicz, Adam Categorical and algebraic aspects of Martin-Löf type theory. 91k:03156
- de Paiva, Valeria C. V. The Dialectica categories. 91d:03023
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- Robinson, Edmund (with Rosolini, Giuseppe) Colimit completions and the effective topos. 91f:03130
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- Sazonov, V. Yu. A category of many-sorted algebraic theories which is equivalent to the category of categories with finite products. 91f:03131
- Seedorv, A. see Bainbridge, E. S.; et al., 91g:03129a and 91g:03129b
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- Ehrhard, Thomas Dictoses. 91b:68070
- Ghilardi, Silvio Presheaf semantics and independence results for some nonclassical first-order logics. 91f:03048
- Jacobs, Bart On the semantics of second order lambda calculus: from Bruce-Meyer-Mitchell models to hyperdoctrine models and vice-versa. 91b:03029
- Jarzemski, Grzegorz Categorical characterization of universally axiomatizable classes of finitary relational systems. 91j:03051
- Jay, C. Barry A note on natural numbers objects in monoidal categories. 91g:18006
- Kawahara, Yasuo Pushout-complements and basic concepts of grammars in toposes. 91m:68113
- Lafont, Yves Primitive recursive categories and machines. (French summary) 91k:03106
- Lavendhomme, R. (with Lucas, Thierry Eugène; Reyes, Gonzalo E.) Formal systems for topos-theoretic modalities. 91f:03032
- van der Linden, F. J. see Rodenburg, P. H., 91c:18012
- Longo, Giuseppe<sup>1</sup> On Church's formal theory of functions and functionals. The  $\lambda$ -calculus: connections to higher type recursion theory, proof theory, category theory. 91k:03022
- Lucas, Thierry Eugène see Lavendhomme, R.; et al., 91f:03032
- MacDonald, John L. (with Stone, Arthur L.) The natural number bialgebra. (French summary) 91c:18006
- Mac Lane, Saunders The development of mathematical ideas by collision: the case of categories and topos theory. 91c:18001
- Mahr, Bernd Empty carriers: the categorical burden on logic. 91f:03059
- Makkai, Michael A theorem on Barr-exact categories, with an infinitary generalization. 91b:18003
- Marti-Ollet, Narciso (with Meseguer, José) From Petri nets to linear logic. 91a:68187
- Meseguer, José see Marti-Ollet, Narciso, 91a:68187
- Mijoule, Richard Une généralisation des ensembles énumérés. [A generalization of enumerated sets] 91f:03097
- Moerdijk, Ieke Descent theory for toposes. 91b:18005
- Montagna, Franco (with Sorbi, Andrea) Creativeness and completeness in recursion categories of partial recursive operators. 91d:03017
- Mulry, Philip S. Some connections between models of computation. 91a:68061
- de Paiva, Valeria C. V. A Dialectica-like model of linear logic. 91a:03061
- Paré, Robert Some applications of categorical model theory. 91b:03048
- (with Román, Leopoldo) Monoidal categories with natural numbers object. 91j:18012
- Pitts, Andrew M. (with Taylor, Paul) A note on Russell's paradox in locally Cartesian closed categories. 91k:03018
- Reyes, Gonzalo E. see Lavendhomme, R.; et al., 91f:03032
- Rodenburg, P. H. (with van der Linden, F. J.) Manufacturing a Cartesian closed category with exactly two objects out of a  $C$ -monoid. 91c:18012
- Román, Leopoldo Cartesian categories with natural numbers object. 91a:18012
- see also Paré, Robert, 91j:18012
- Scott, Philip J. Functorial polymorphism and semantic parametricity. (French summary) 91g:03037
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- Streicher, Thomas Independence results for calculi of dependent types. 91a:68184
- Szabo, M. E. Coherence in Cartesian closed categories and the generality of proofs. 91j:03074
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- Vasyukov, V. L. Quantum logic in topoi. (Russian) 91k:03148

### 03Hxx Nonstandard models [see also 03C62]

#### 03H05 Nonstandard models in mathematics [see also 26E35, 28E05, 30G06, 46S20, 47S20, 54J05]

- Acero Castellanos, José S. (with Puerta Ortiz, Fernando) Sets of finite, infinite and infinitesimal elements in a superdense set. (Spanish) (see 91k:00038)
- Almada Barrios, Rafael Enrique Construction of a superdense set. (Spanish) (see 91k:00038)
- Christian, Curt C. Über die monadisch-galaktische Struktur des der Nonstandard-Analysis zugrundeliegenden (cauchysch-nichtarchimedischen) Körpers der hyperreellen Zahlen. [On the monadic-galactic structure of the (Cauchy-non-Archimedean) field of hyperreal numbers on which nonstandard analysis is based] 91b:03107
- Cutland, Nigel J. Transfer theorems for  $\kappa$ -monads. 91c:03050
- Diener, Francine (with Reeb, Georges)  $\star$  Analyse non standard. (French) [Nonstandard analysis] 91k:03157
- (with Diener, Marc) A very short survey of nonstandard analysis' contribution to the theory of ordinary differential equations. 91b:03108
- Diener, Marc see Diener, Francine, 91b:03108
- Dotto, Oclide José The foundations of infinitesimals. (Portuguese. English summary) 91f:03132
- Ferro, Ruggiero Some considerations on the infinite, infinitesimals and the Archimedean property suggested by A. Robinson's nonstandard analysis. (Italian) 91f:03133
- Fletcher, Peter Nonstandard set theory. 91b:03109
- Gehrke, Mal (with Insall, Matt; Kaiser, Klaus) Some nonstandard methods applied to distributive lattices. 91i:03128
- Insall, Matt see Gehrke, Mal; et al., 91i:03128
- Kaiser, Klaus see Gehrke, Mal; et al., 91i:03128
- Kalina, Martin On the sum of independent random variables. (Russian and Slovak summaries) (Not in MR)
- Landers, Dieter (with Rogge, Lothar) Dominated and uniformly dominated families of Loeb-measures. 91f:03134

- Long, Wen Ting A nonstandard analytic proof of Cauchy-Goursat integral theorem. (Not in MR)
- Martin Barquero, Dolores *see* Martín González, Cándido, 91e:03056
- Martín González, Cándido (with Martín Barquero, Dolores) Nonstandard analysis and the structure of filters. (Spanish) 91e:03056
- Miller, Arnold W. Set-theoretic properties of Loeb measure. 91g:03130
- Pérelle, Yves A general theory of infinitesimals. 91m:03066
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- Puerta Ortiz, Fernando *see* Acero Castellanos, José S., (91k:00038)
- Reeb, Georges *see* Diemer, Francine, 91k:03157
- Revellis, Jean-Pierre Discretisations finies de la droite réelle et applications à la théorie de l'itération. [Finite discretizations of the real line and applications to the theory of iteration] 91j:03061
- (Robinson, Abraham) *see* Ferro, Ruggero, 91f:03133
- Rogge, Lothar *see* Landers, Dieter, 91f:03134
- Ross, David Andrew The special model axiom in nonstandard analysis. 91h:03091
- Lifting theorems in nonstandard measure theory. 91h:03110
- Sun, Guang Run *see* Xu, Li Zhi, 91k:03158
- Tortorelli, V. M. A characterization of internal sets. 91i:03129
- Tselvin, Ya. V. Nonstandard analysis and the induction principle. (Russian) 91j:03082
- Xu, Li Zhi (with Sun, Guang Run) The generalized Duhamel principle and its applications. II. (Chinese. English summary) 91k:03158
- Živaljević, Boško Rado's theorem for the Loeb space of an internal  $\omega$ -finitely additive measure space. 91h:03092

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- Aksoy, Asuman G. (with Khamsi, Mohamed A.) ★ Nonstandard methods in fixed point theory. 91f:47073
- Albeverio, Sergio (with Fenstad, Jens Erik; Hoegh-Krohn, Raphael J.; Lindström, Tom L.) ★ Нестандартные методы в стохастическом анализе и математической физике. (Russian) [Nonstandard methods in stochastic analysis and mathematical physics] 91i:00001
- Belikov, S. A. (with Samborskii, S. N.) Duck-cycles of fast-slow vector fields with one-dimensional slow variable. (French summary) 91j:58114
- Benoit, Eric Canards et enlacements. [Canards and links] 91h:34086
- Canards et enlacements. [Canards and links] 91m:58133
- van den Berg, I. P. Sur la sommation au plus petit terme des séries divergentes. (English summary) [Summation of divergent series to the smallest term] 91e:30078
- On solutions of polynomial growth of ordinary differential equations. 91g:34014
- Borovik, I. A. An approach to almost controllability in the theory of nonlinear dynamical systems. (Russian) 91a:93002
- Brunet, Bernard An elementary nonstandard proof of Stone's representation theorem. 91m:46032
- Canalis-Durand, Mireille Caractère Grevy du développement formel des solutions canard de l'équation de van der Pol. (English summary) [Grevy character of the formal expansion of the canard solutions of the van der Pol equation] 91j:34084
- Chang, Chen Chung (with Keisler, H. Jerome) ★ Model theory. 91c:03026
- Chapovsky, Y. Sur la désingularisation des systèmes différentiels. [On the desingularization of differential systems] 91k:34047
- Chen, Guang Yi (with Shen, Cheng Min) Hyperglobal asymptotic stability. (Chinese. English summary) (Not in MR)
- Cutland, Nigel J. The Brownian bridge as a flat integral. 91a:60207
- An action functional for Lévy Brownian motion. 91i:60132
- Delcroix, Antoine (with Diemer, Marc) Variables locales pour les équations différentielles lentes-rapides. (English summary) [Inner variables for fast-slow differential equations] 91j:58117
- Diemer, Marc *see* Delcroix, Antoine, 91j:58117
- Drossos, C. A. Foundations of fuzzy sets: a nonstandard approach. 91m:03056
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- Fenstad, Jens Erik *see* Albeverio, Sergio; et al., 91i:00001
- Gordon, E. I. On the Fourier transform in nonstandard analysis. 91g:42006
- Haddad, Lahib Condorcet et les ultrafiltres. [Condorcet and ultrafilters] 91h:90019
- Hoegh-Krohn, Raphael J. *see* Albeverio, Sergio; et al., 91i:00001
- Hoover, Douglas N. Adapted distribution. (see 91j:60003)
- Hoskins, Roy Frank ★ Standard and nonstandard analysis. 91g:26034
- Keisler, H. Jerome (with Kunen, Kenneth; Miller, Arnold W.; Leth, Steven) Descriptive set theory over hyperfinite sets. 91c:03040
- *see also* Chang, Chen Chung, 91c:03026
- Khamsi, Mohamed A. *see* Aksoy, Asuman G., 91f:47073
- Kinosita, Moto-o Nonstandard representations of distributions. II. 91m:46054
- (Kirk, W. A.) *see* Aksoy, Asuman G., 91f:47073
- Kolesov, A. Yu. Canard-trajectories of relaxation systems that are connected with the violation of the normal switching condition. 91c:34078
- Kunen, Kenneth *see* Keisler, H. Jerome; et al., 91c:03040
- Kusraev, A. G. (with Kutateladze, S. S.) Combination of nonstandard methods. I. Monadology. 91k:03097
- Kutateladze, S. S. *see* Kusraev, A. G., 91k:03097
- Laugwitz, Detlef Definite values of infinite sums: aspects of the foundations of infinitesimal analysis around 1820. 91a:01025
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- Lindström, Tom L. Nonstandard constructions of diffusions and related processes. (see 91j:60003)
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- Lobry, Claude À propos du "paradoxe" de Wong et Zakai. [On the Wong-Zakai "paradox"] 91h:60071
- Lyubetskii, V. A. Estimates and sheaves. Some problems in nonstandard analysis. 91k:03155
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- Moerdijk, Ieke (with Reyes, Gonzalo E.) ★ Models for smooth infinitesimal analysis. 91m:18017
- Molchanov, V. A. On the application of the theory of binary relations in topology. (Russian) 91h:54058
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- Murawski, Roman Semantics for nonstandard languages. 91g:03059
- Nelson, Edward A modified Hilbert program. 91f:03119
- de Oliveira, A. J. Franco The advent of nonstandard mathematics. (Portuguese. English summary) 91e:03002
- Pestov, V. G. On a "super" version of Lie's third fundamental theorem. 91a:58016
- Ratković, Miodrag Covering theorem for sequences of integers. (Serbo-Croatian summary) 91m:28025
- Reimers, M. Hyperfinite methods for multidimensional stochastic processes. (see 91j:60003)
- Reyes, Gonzalo E. *see* Moerdijk, Ieke, 91m:18017
- Ross, David Andrew Selectionable distributions for a random set. 91i:60037
- Samborskii, S. N. *see* Belikov, S. A., 91j:58114
- Sánchez-Pedro, G. Salvador Un problème aux limites avec perturbation singulière à deux paramètres. (English summary) [A two-point boundary value problem with two-parameter singular perturbation] 91c:34031a
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- Sari, N. (with Schmitt, Bruno V.) Oscillations lentement forcées du pendule simple. (English summary) [Slow forced oscillations of the simple pendulum] 91h:34062
- Schmitt, Bruno V. *see* Sari, N., 91h:34062
- Seke, Bobo Quelques histoires simples pour David. [Some simple stories for David] 91h:26023
- Shen, Cheng Min Differentiating between indefinite forms in tests for series in standard analysis by using a hyperreal number field. (Chinese. English summary) (Not in MR)
- *see also* Chen, Guang Yi, (Not in MR)
- (Shubin, M. A.) *see* Albeverio, Sergio; et al., 91i:00001
- Simpson, Adrian P. The infidel is innocent. 91g:26035
- Stoll, Andreas Invariance principles for Brownian intersection local time and polymer measures. 91g:82051
- Sun, Yueneng A Banach space in which a ball is contained in the range of some countably additive measure is superreflexive. 91a:46018
- Todorov, Todor D. A nonstandard delta function. 91c:46060
- Troesch, A. Lorsque les canards naissent dans les tourbillons. [When canards arise in vortices] 91d:58192
- Trufimov, V. I. Some asymptotic characteristics of groups. 91g:05064
- Ursache, É. Un système rapidement oscillant. [A rapidly oscillating system] 91j:34063
- Vakil, Nader A nonstandard compactness condition for sets of continuous functions. 91j:54071
- Venkatesan, R. On fuzzy topological spaces. (Not in MR)
- Wallet, Guy Dérive lente du champ de Liénard. [Slow drift of the Liénard field] 91f:34075
- Wild, F. G. J. Sheaf representation of normed spaces. 91j:46095
- Yasugi, Mariko Infinitesimal calculus interpreted in infinitary logic. 91g:03078
- Yasumoto, Masahiro Nonstandard arithmetic of iterated polynomials. 91g:11156
- Zvonkin, A. K. Nonstandard analysis in probability theory. (see 91j:60003)
- *see also* Albeverio, Sergio; et al., 91i:00001

## 03H10 Other applications of nonstandard models (economics, physics, etc.)

- Lewis, Alain A. On the independence of core-equivalence results from Zermelo-Fraenkel set theory. 91f:03135
- Nelson, Edward What is stochastic mechanics? 91f:03136

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- Albeverio, Sergio (with Fenstad, Jens Erik; Hoegh-Krohn, Raphael J.; Lindström, Tom L.) ★ Нестандартные методы в стохастическом анализе и математической физике. (Russian) [Nonstandard methods in stochastic analysis and mathematical physics] 91i:00001
- Arkeryd, Laila On the generation of measure valued solutions on  $\mathbb{R}^d$  from Loeb solutions on  $\mathbb{R}^d$  for the Boltzmann equation. 91c:82050
- Bailly, F. *see* Mosseri, Rémy, 91i:52013
- Berz, Martin *see* Forest, Etienne, (91a:78001)
- Bohé, Adriana Free layers in a singularly perturbed boundary value problem. 91h:34087
- Delfini, Pierre *see* Lobry, Claude, 91i:93019
- Fenstad, Jens Erik *see* Albeverio, Sergio; et al., 91i:00001
- Forest, Etienne (with Berz, Martin) Canonical integration and analysis of periodic maps using nonstandard analysis and Lie methods. (see 91a:78001)
- Hoegh-Krohn, Raphael J. *see* Albeverio, Sergio; et al., 91i:00001
- Lindström, Tom L. *see* Albeverio, Sergio; et al., 91i:00001
- Lobry, Claude (with Delfini, Pierre) Formal controllability and physical controllability of linear systems. 91i:93019
- Mosseri, Rémy (with Bailly, F.) From approximants to quasicrystals: a nonstandard approach. 91i:52013
- de Oliveira, A. J. Franco The advent of nonstandard mathematics. (Portuguese. English summary) 91e:03002
- (Shubin, M. A.) *see* Albeverio, Sergio; et al., 91i:00001
- (Zvonkin, A. K.) *see* Albeverio, Sergio; et al., 91i:00001

## 03H15 Nonstandard models of arithmetic [see also 11U10, 12L15, 13L05]

- Murphy, Noël The natural numbers in internal set theory. 91m:03067
- Plisko, V. E. Constructive formalization of a theorem of Tennenbaum and its applications. 91m:03068



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- Canjar, R. Michael. Cardinalities of countable ultraproducts: the existence theorem. 91c:03028
- Cheng, C. T. Hyperhypersimple sets and  $\Delta_2$  systems. 91g:03114
- Čuda, Karel. On the adjunction of any semiset to the system of  $S_d$ -classes in AST. 91h:03076
- Enayat, Ali. Minimal elementary extensions of models of set theory and arithmetic. 91j:03049
- Kaye, Richard William. Diophantine induction. 91f:03117
- Kossak, Roman. A correction to: "On extensions of models of strong fragments of arithmetic" [Proc. Amer. Math. Soc. 108 (1990), no. 1, 223–232; MR 90d:03123]. 91f:03050
- Krajčiek, Jan (with Pudlák, Pavel). Propositional provability and models of weak arithmetic. (see 91g:03006)
- Miller, Arnold W. Set-theoretic properties of Loeb measure. 91g:03130
- Murawski, Roman. A note on the variety of satisfaction classes. 91h:03045
- Nadel, Mark (with Stavi, Jonathan). On models of the elementary theory of  $(\mathbb{Z}, +, 1)$ . 91a:03078
- Pudlák, Pavel. (see Krajčiek, Jan, (91g:03006))
- Stavi, Jonathan. (see Nadel, Mark, 91a:03078)
- Yu, Xiaokang. Radon-Nikodym theorem is equivalent to arithmetical comprehension. 91h:03085

## 04–XX Set theory [see also 03Exx]

## 04–00 General reference works (handbooks, dictionaries, bibliographies, etc.)

## Items with secondary classifications in 04–00

- Dubois, Didier (with Prade, Henri M.). Recent literature. 91g:00004
- Prade, Henri M. (see Dubois, Didier, 91g:00004)
- (Sessa, Salvatore) (see Dubois, Didier, 91g:00004)

## Items listed otherwise than by author

## Bibliography:

- Fuzzy sets and systems (see Dubois, Didier, 91g:00004)

## 04–01 Instructional exposition (textbooks, tutorial papers, etc.)

## Items with secondary classifications in 04–01

- Rothman, Judith. ★ Introduction to modern set theory. 91h:03003

## 04–03 Historical (must also be assigned at least one classification number from Section 01)

## Items with secondary classifications in 04–03

- (Cantor, Georg) (see Purkert, Walter, 91a:01028; Moore, Gregory H., 91g:01030; Dauben, Joseph Warren, 91g:01032; 91h:01044 and Mejibo, Lars, 91h:01044)
- Dauben, Joseph Warren. © Georg Cantor: the battle for transfinite set theory. 91g:01032
- ★ Georg Cantor. 91h:01044
- Kanovei, V. G. (see Uspenskii, V. A., 91h:01034)
- (Kurepa, Djuro R.). (see Mamuzić, Zlatko P., (91e:01001))
- Mamuzić, Zlatko P. The 35th anniversary of Professor Djuro Kurepa's book *Set theory*. (Serbo-Croatian) (see 91e:01001)
- Mejibo, Lars. Georg Cantor and transfinite set theory. (Danish. English summary) 91i:01044
- Moore, Gregory H. Towards a history of Cantor's continuum problem. 91g:01030
- (Peano, Giuseppe) (see Zaitsev, E. A., 91h:01030)
- Peckhaus, Volker. "Ich habe mich wohl gehütet, alle Patronen auf einmal zu verschießen." Ernst Zermelo in Göttingen. (English summary) ["I made sure not to use up all my bullets at once." Ernst Zermelo in Göttingen] 91h:01060
- Purkert, Walter. Cantor's views on the foundations of mathematics. 91a:01028
- (Sulis, M. Ya.). (see Uspenskii, V. A., 91h:01034)
- Uspenskii, V. A. (with Kanovei, V. G.). M. Ya. Suslin's contribution to set-theoretic mathematics. (Russian) 91h:01034
- Zaitsev, E. A. G. Peano on the concept of "that, which" and the possibility of its elimination from a theory. (Russian. English summary) 91h:01030
- (Zermelo, Ernst) (see Peckhaus, Volker, 91h:01060)

## Items listed otherwise than by author

## Biography:

- Cantor, Georg (see Dauben, Joseph Warren, 91g:01032)

## 04–04 Explicit machine computation and programs (not the theory of computation or programming)

## Items with secondary classifications in 04–04

- Suppes, Patrick (with Takahashi, Shuzo). An interactive calculus theorem-prover for continuity properties. 91a:68242
- Takahashi, Shuzo (see Suppes, Patrick, 91a:68242)

## 04A03 Set algebra

## Items with secondary classifications in 04A03

- Fraze, Jerome. A new symbolic representation for the algebra of sets. 91f:03110

## 04A05 Relations, functions [see also 08A02]

- Baryshev, I. A. A combinatorial-logical approach to a taxonomy problem. (Russian) (see 91k:00013)
- Burdjuk, V. Ya. Reciprocal transitivity of binary relations. (Russian) 91h:04001
- Fang, Weifu. The proofs of several theorems about the order relation. (Not in MR)
- Fraïssé, Roland (with Lopez, Gérard). ★ La reconstruction d'une relation dans l'hypothèse forte: isomorphie des restrictions à chaque partie stricte de la base. (French) [Reconstructing a relation under the strong hypothesis: isomorphism of the restrictions to every proper subset of the base] 91f:04001
- Kipiani, A. E. A uniform subset in  $\omega_\alpha \times \omega_\alpha$ . (Russian. English and Georgian summaries) 91h:04002
- Lopez, Gérard (see Fraïssé, Roland, 91f:04001)
- Mala, J. (with Szász, Á.). Equations for families of relations can also be solved. 91i:04001
- (Rauzy, C.) (see Fraïssé, Roland, 91f:04001)
- Ronse, Christian. Order-configuration functions: mathematical characterizations and applications to digital signal and image processing. 91f:04002
- Rus, Ioan A. R-contractions. (Romanian summary) 91i:04002
- Shabanov-Kushnarenko, Yu. P. (see Sitnikov, D. E., 91f:04003)
- Sitnikov, D. E. (with Shabanov-Kushnarenko, Yu. P.). Some properties of order predicates. (Russian) 91f:04003
- Šlapal, Josef. On relations. 91c:04001
- Szász, Á. (see Mala, J., 91i:04001)

## Items with secondary classifications in 04A05

- Babin, D. N. Superpositions of bounded-deterministic functions. 91d:68097
- Balcerzak, Marek. On isomorphisms between  $\sigma$ -ideals on  $\omega_1$ . 91k:04003
- Prešić, Slavica B. All reproductive solutions of finite equations. 91a:06019
- Sterna-Karwat, Alicia. On a structure of preorder relations on a topological space. 91e:54085
- Van Cutsem, Bernard. Minimal superior ultrametrics under order constraint. 91f:06001
- Wagner, Dorothea. Decomposition of  $k$ -ary relations. 91h:05100

## 04A10 Ordinal and cardinal numbers; generalizations [see also 03E10]

- Alling, Norman L. (with Swartz, Timothy A.). Monomorphisms of inductive number systems. 91k:04001
- Castillo, Jesús M. F. (with Navarro, Juan A.).  $\mathbb{R}$  is countable. (see 91m:00025)
- Navarro, Juan A. (see Castillo, Jesús M. F., (91m:00025))
- Swartz, Timothy A. (see Alling, Norman L., 91k:04001)

## Items with secondary classifications in 04A10

- Ehrlich, Philip. Absolutely saturated models. 91k:03087
- Flum, Jörg. On  $n$ -to-one images of compact ordinals. (see 91f:03008)
- Hartke, Leon. Recursive surreal numbers. 91i:03119
- Kim, Sang Mun. Two generalized weak ordering  $O_\kappa^\omega$ . (Not in MR)
- Pfeffer, Washek F. (with Prikyr, Karel). A characterization of cardinals  $\kappa$  such that  $2^\kappa = 2^\kappa$  whenever  $\kappa \leq \lambda < 2^\kappa$ . 91a:03097
- Prikyr, Karel (see Pfeffer, Washek F., 91a:03097)
- Rathjen, Michael. Ordinal notations based on a weakly Mahlo cardinal. 91f:03115
- Reingold, Edward M. (with Shen, Xiao Jun). More nearly optimal algorithms for unbounded searching. II. The transfinite case. 91m:68091b
- Shen, Xiao Jun (see Reingold, Edward M., 91m:68091b)

## 04A15 Descriptive set theory; Borel classifications, Suslin schemes, etc. [see also 03E15, 26A21, 28A05, 54H05]

- Balcerzak, Marek (with Rosłanowski, Andrzej). On Mycielski ideals. 91d:04001
- Cichoń, Jacek. On two-cardinal properties of ideals. 91a:04001
- Fremlich, D. H. A new notion of  $\kappa$ -Suslin operation. 91i:04003
- Kharazishvili, A. B. ★ Приложения теории множеств. (Russian) [Applications of set theory] 91m:04001
- Some problems in set theory. (Russian. English and Georgian summaries) 91j:04001
- Orwat, Waldemar. Some strong zero-measure sets. (Polish. English summary) 91h:04002
- Parovichenko, I. I. The topological power of set-theoretic operations. 91h:04001
- Pawlikowski, Janusz. Parametrized Eilenberg theorem. 91j:04002
- Rosłanowski, Andrzej (see Balcerzak, Marek, 91d:04001)
- Shortt, Rae Michael. Measurable rigidity, super-rigidity and the Blackwell property. 91c:04002

## Items with secondary classifications in 04A15

- Bagemihl, F. Throwing a dart at Freiling's argument against the continuum hypothesis. 91g:04002
- Blackwell, David. Operator solution of infinite  $G_\delta$  games of imperfect information. 91d:90107
- Choban, M. M. Descriptive set theory and topology. (Russian) (see 91e:54001)
- van Engelen, Fons (with Kunen, Kenneth; Miller, Arnold W.). Two remarks about analytic sets. 91a:54050
- Jasiński, Jakub (with Weiss, Tomasz). Sierpiński sets and strong first category. 91d:28003
- Kahane, Sylvain. Ensembles de convergence absolue, ensembles de Dirichlet faibles et  $I$ -idéaux. (English summary) [Sets of absolute convergence, weak Dirichlet sets and  $I$ -ideals] 91k:42016
- Kalina, Martin (with Zlatoš, Pavol). Some connections between measure, indiscernibility and representation of cuts. 91j:03071

- Kanovei, V. G. *see* Uspenskii, V. A., 91b:01034
- Kechris, A. S. (with Louveau, Alain; Tardivel, V.) The class of synthesizable pseudomeasures. 91b:03005
- Kunen, Kenneth *see* van Engelen, Fons; et al., 91a:54050
- Lefmann, Hanno Canonical partition behaviour of Cantor spaces. 91a:04002
- Louveau, Alain *see* Kechris, A. S.; et al., 91b:03005
- Maddy, Penelope A problem in the foundations of set theory. 91m:03003
- Miller, Arnold W. Set-theoretic properties of Lebesgue measure. 91g:03130  
— *see also* van Engelen, Fons; et al., 91a:54050
- Morgan, John C., II ★ Point set theory. 91a:54051
- Pawlikowski, Janusz Small subset of the plane which almost contains almost all Borel functions. 91d:28004
- Reclaw, Ireneusz Products of perfectly meagre sets. 91j:28001
- Repický, M. Porous sets and additivity of Lebesgue measure. 91a:03098
- (Suslin, M. Ya.) *see* Uspenskii, V. A., 91b:01034
- Tardivel, V. *see* Kechris, A. S.; et al., 91b:03005
- Uspenskii, V. A. (with Kanovei, V. G.) M. Ya. Suslin's contribution to set-theoretic mathematics. (Russian) 91b:01034
- Weiss, Tomasz *see* Jasiński, Jakub, 91d:28003
- Zafrany, Samy On analytic filters and prefilters. 91c:03042
- Zlotof, Pavol *see* Kalina, Martin, 91j:03071
- 04A20 Combinatorial set theory [see also 03E05, 05A05]; filters**
- Balcerzak, Marek On isomorphisms between  $\sigma$ -ideals on  $\omega_1$ . 91b:04003
- Bełagić, Amer Partitions of vector spaces. 91d:04002
- Butkovičová, Eva Decreasing chains without lower bounds in the Rudin-Frolík order. 91f:04004
- A remark on incomparable ultrafilters in the Rudin-Keisler order. 91f:04004
- Erdős, Paul (with Komjáth, Péter) Countable decompositions of  $\mathbb{R}^2$  and  $\mathbb{R}^3$ . 91b:04002
- He, Sui *see* Zhao, Dong Fang, (Not in MR)
- Just, Winfried Equivalence under decomposition. A graph-theoretical approach. 91b:04003
- Komjáth, Péter *see* Erdős, Paul, 91b:04002
- Lawrence, L. Brian Using partitions to characterize the minimum cardinality of an unbounded family in  ${}^\omega\omega$ . 91b:04004
- Lefmann, Hanno Canonical partition behaviour of Cantor spaces. 91a:04002
- Taylor, Alan D. Separating collections. 91i:04005
- Todorćević, Stevo Partitioning pairs of countable sets. 91f:04005
- Wehrung, Friedrich Théorème de Hahn-Banach et paradoxes continus ou discrets. (English summary) [The Hahn-Banach theorem and continuous or discrete paradoxes] 91a:04003
- Yang, Wen Qi An extension of primary factorization and its application. (Chinese) (Not in MR)
- Zakrzewski, Piotr The existence of universal invariant measures on large sets. 91f:04006
- Paradoxical decompositions and invariant measures. 91f:04007
- Zhao, Dong Fang (with He, Sui) On a wrong proof of Béla Bollobás. (Chinese summary) (Not in MR)
- Items with secondary classifications in 04A20**
- Aharoni, Ron (with Milner, E. C.; Priky, Karel) Unfriendly partitions of a graph. 91g:05099
- Bathedat, André Les isomorphismes HTS et HTE (après la bijection de Benzécri/Johnson). I. (English summary) [The isomorphisms HTS and HTE (following the Benzécri-Johnson bijection). I] 91c:05137
- Beers, Donna (with Hunter, Roger; Richman, Fred; Walker, Elbert A.) Computing valued trees. 91f:06005
- Blass, Andreas (with Hindman, Neil) Sums of ultrafilters and the Rudin-Keisler and Rudin-Frolík orders. 91i:03093
- Bramble, G. W. The ultrafilter theorem in real algebraic geometry. 91d:14037
- Cunjor, R. Michael Cofinalities of countable ultrapowers: the existence theorem. 91c:03028
- Gillis, J. The statistics of derangement—a survey. 91c:05005
- Goldstern, Martin (with Shelah, Saharon) Ramsey ultrafilters and the reaping number— $\text{Con}(\tau < \mathfrak{u})$ . 91m:03050
- Hadjoui, Brahim Un théorème de décomposition de Lebesgue sur l'ensemble des parties d'un ensemble ordonné orthomodulaire. (English summary) [A Lebesgue decomposition theorem on certain subsets of an orthomodular partially ordered set] 91m:06020
- Hajnal, A. (with Juhász, I.; Weiss, William A. R.) Partitioning the pairs and triples of topological spaces. 91i:03095
- Hindman, Neil *see* Blass, Andreas, 91i:03093
- Hodel, R. E. Combinatorial set theory and cardinal function inequalities. 91f:54002
- Hunter, Roger *see* Beers, Donna; et al., 91f:06005
- Judah, Haim I. Unbounded filters on  $\omega$ . 91i:03097
- Juhász, I. *see* Hajnal, A.; et al., 91i:03095
- Just, Winfried (with Laflamme, Claude) Classifying sets of measure zero with respect to their open covers. 91a:28003
- Kharazishvili, A. B. ★ Приложения теории множеств. (Russian) [Applications of set theory] 91m:04001
- Laflamme, Claude *see* Just, Winfried, 91a:28003
- Leary, Christopher C. Patching ideal families on  $\mathcal{P}_\lambda\lambda$ . 91j:03064
- Logunov, S. A. (with Malykhin, V. L.) Nowhere dense subsets of  $\mathbb{N}^*$  and types of ultrafilters. 91c:03043
- Loan, Ru Shu Enumeration of taxonomic sets and maximal taxonomic sets. (Chinese. English summary) 91c:05015
- Malykhin, V. L. *see* Logunov, S. A., 91c:03043
- Martin Barquero, Dolores *see* Martín González, Cándido, 91c:03056
- Martín González, Cándido (with Martín Barquero, Dolores) Nonstandard analysis and the structure of filters. (Spanish) 91c:03056
- Milner, E. C. *see* Aharoni, Ron; et al., 91g:05099
- Priky, Karel *see* Aharoni, Ron; et al., 91g:05099
- Richman, Fred *see* Beers, Donna; et al., 91f:06005

- Shelah, Saharon *see* Goldstern, Martin, 91m:03050
- Walker, Elbert A. *see* Beers, Donna; et al., 91f:06005
- Weiss, William A. R. *see* Hajnal, A.; et al., 91i:03095
- Zeng, Jiang Calcul saalschützen der partitionen und des dérangements colorés. (English summary) [Saalschütz calculation of colored partitions and derangements] 91c:05016

## 04A25 Axiom of choice and equivalent propositions (Zorn's lemma, etc.) [see also 03E25]

- Brunner, Norbert Set-mappings on Dedekind sets. 91b:04005
- Howard, Paul E. Definitions of compact. 91g:04001
- Kim, Sang Mun<sup>2</sup> Two generalized well ordering  $\mathcal{O}_\alpha^*$ . (Not in MR)
- Lewin, Jonathan A simple proof of Zorn's lemma. (Not in MR)
- Turinici, Mihai Pseudometric and cardinal extensions of the Brézis-Browder ordering principle. 91f:04008

Items with secondary classifications in 04A25

- Banaschewski, Bernhard On proving the Tychonoff product theorem. 91j:54011  
— (with Moore, Gregory H.) The dual Cantor-Bernstein theorem and the partition principle. 91k:03128
- Brunner, Norbert The Fraenkel-Mostowski method, revisited. 91g:03099
- Moore, Gregory H. *see* Banaschewski, Bernhard, 91k:03128
- Paseka, Jan A note on the prime ideal theorem. 91c:06010

## 04A30 Continuum hypothesis, generalized continuum hypothesis [see also 03E50, 54A25]

- Bagemihl, F. Throwing a dart at Freiling's argument against the continuum hypothesis. 91g:04002
- Kalikow, Steven Sequences of reals to sequences of zeros and ones. 91d:04003
- Items with secondary classifications in 04A30**
- (Bagemihl, F.) *see* Freiling, Chris, 91k:03134
- Dugas, Manfred (with Thomé, Bernhard) The functor  $\text{Bext}$  under the negation of CH. 91m:20074
- Erdős, Paul (with Komjáth, Péter) Countable decompositions of  $\mathbb{R}^2$  and  $\mathbb{R}^3$ . 91b:04002
- Freiling, Chris (with Simms, John C.) A three-dart response to an argument of Bagemihl. A comment on: "Throwing a dart at Freiling's argument against the continuum hypothesis" [Real Anal. Exchange 15 (1989/1990), no. 1, 342–345; MR 91g:04002] by F. Bagemihl. 91k:03134
- Komjáth, Péter *see* Erdős, Paul, 91b:04002
- Schaffitzel, Reinhard The algebra of decomposable operators in direct integrals of not necessarily separable Hilbert spaces. 91c:47091
- Simms, John C. *see* Freiling, Chris, 91k:03134
- Thomé, Bernhard *see* Dugas, Manfred, 91m:20074

## 04A72 Fuzzy sets, fuzzy relations [see also 03E72, 94D05] {For fuzzy versions, see specific sections.}

- Adamopoulos, G. I. *see* Pappis, C. P., (Not in MR)
- Aliiev, R. A. (with Mamedova, G. A.) Analysis of fuzzy models of industrial processes. 91d:04004
- Bandemer, Hans A special measure of uncertainty. 91j:04003
- Brynarski, Edward A calculus of rough sets of the first order. (Russian summary) 91m:04002
- Buckley, James J. (with Siler, William) Fuzzy numbers for expert systems. 91b:04006  
— On the algebra of interactive fuzzy numbers: the continuous case. 91b:04003  
— (with Qu, Yun Xia) Solving linear and quadratic fuzzy equations. 91h:04004  
— (with Qu, Yun Xia) On using  $\alpha$ -cuts to evaluate fuzzy equations. 91j:04004  
— (with Qu, Yun Xia) Solving fuzzy equations: a new solution concept. 91m:04003
- de Campos Ibáñez, Luis Miguel (with Moral, Serafin) Fuzzy measures with different levels of granularity. 91c:04003
- Cen, Yong Ting Level middle fuzzy operators. (Chinese. English summary) 91b:04007
- Chen, Yi Yuan<sup>2</sup> Fixed-point theorems for fuzzy reflexive relations. (Chinese. English summary) (Not in MR)
- Cheng, Li Chun (with Zhang, Qing Yu) The bilateral union-intersection operator. 91d:04005
- Di Nola, Antonio (with Lettieri, Ada; Sessa, Salvatore) Resolution of some symmetric fuzzy relation equations on residuated structures. (Romanian summary) 91j:04005
- Dombi, J. Membership function as an evaluation. 91a:04004
- Dubois, Didier (with Prade, Henri M.) Measuring properties of fuzzy sets: a general technique and its use in fuzzy query evaluation. 91i:04006  
— (with Prade, Henri M.; Sessa, Salvatore) Recent literature. (Not in MR)  
— (with Prade, Henri M.; Sessa, Salvatore) Recent literature. (Not in MR)
- Fang, Hao Jian A general algorithm for eigen-fuzzy equations. (Chinese. English summary) (Not in MR)
- Filep, László (with Maurer, Iulius Gyula) Compatible fuzzy relations and groups. 91j:04006
- Fuhrmann, Gy. Note on the generality of fuzzy sets. 91d:04006
- Gachechiladze, T. G. (with Mandzhaparashvili, T. V.) A dual element and a relative pseudocomplement in a lattice of fuzzy subsets. (Russian. English and Georgian summaries) 91c:04004
- Gil Álvarez, Pedro Ángel (with Gil, M. A.; Menéndez, M. L.; Pardo, Leandro) Connections between some criteria to compare fuzzy information systems. 91g:04003
- Gil, M. A. *see* Gil Álvarez, Pedro Ángel; et al., 91g:04003
- González Muñoz, Antonio (with Vila, M. A.) Dominance and indifference relations on fuzzy numbers. 91c:04005  
— A study of the ranking function approach through mean values. 91a:04005

- Gottwald, Siegfried (with Pedrycz, Witold) On the methodology of solving fuzzy relational equations and its impact on fuzzy modelling. 91d:04007
- Govind, Rakesh see Zhao, Renhong, 91k:04006
- Gupta, Madan M. Cognitive uncertainty and perception. (Not in MR)
- Heilpern, Stanislaw Interval random sets and entropy. 91c:04006
- Indjic, Drago Fuzzy interpretation of the Mandelbrot set drawing. 91i:04007
- Kanagawa, Akihiro (with Ohta, Hiroshi<sup>1</sup>) A design for single sampling attribute plan based on fuzzy sets theory. (Not in MR)
- Kandel, Abraham see Murthy, S. Vasudev, 91c:04008
- Kasphitskaya, M. F. (with Serpienko, I. V.; Střanka, A. L.) Some properties of discrete fuzzy sets. (Russian) 91d:04008
- Kerre, Etienne E. (with Van Schooten, Antoine) A deeper look on fuzzy numbers from a theoretical as well as from a practical point of view. 91b:04008
- Kim, Kuk (with Park, Kyung S.) Ranking fuzzy numbers with index of optimism. 91c:04007
- Kovács, Margit (with Tran, Lam Hach) Algebraic structure of centered  $M$ -fuzzy numbers. 91i:04008
- Lai, R. N. (with Jha, S. K.) On fuzzy real numbers. (Not in MR)
- Larsen, H. Legind (with Yager, Ronald R.) Efficient computation of transitive closures. 91h:04005
- Lenart, Cristian Classification with fuzzy relations. II. (Romanian summary) 91i:04009
- Lettieri, Ada see Di Nola, Antonio; et al., 91j:04005
- Li, Hong Xing Multifactorial functions in fuzzy sets theory. 91f:04009
- Multifactorial functions in fuzzy sets theory. 91b:04009
- Li, Su Yun The simplest method of ascending value to find fuzzy transitive closure. 91k:04004
- Liu, Kai Di see Wang, Qing Yin; et al., 91a:04008 and 91g:04008
- Makreev, S. P. Structure of transitive fuzzy relations. 91g:04004
- Mamedova, G. A. see Aliev, R. A., 91d:04004
- Mandzhaparashvili, T. V. see Gachechiladze, T. G., 91c:04004
- Mann, Stuart H. see Triantaphyllou, Evangelos, 91f:04010 and (91h:04014)
- Masner, Julius Gyula see Filip, László, 91j:04006
- Menéndez, M. L. see Gil Álvarez, Pedro Ángel; et al., 91g:04003
- Misra, Krishna B. (with Weber, Gunter G.) Use of fuzzy set theory for level-I studies in probabilistic risk assessment. (Not in MR)
- Miyakoshi, Masaaki (with Shimbo, Masaru) Sets of solution-set equivalent coefficient matrices of fuzzy relation equations. 91h:04010
- Miyamoto, Sadaaki ★ Fuzzy sets in information retrieval and cluster analysis. 91g:04005
- Moral, Serafin see de Campos Ibáñez, Luis Miguel, 91c:04003
- Murthy, S. Vasudev (with Kandel, Abraham) Fuzzy sets and typicality theory. 91c:04008
- Nakamura, Kazuo Canonical fuzzy numbers of dimension two and fuzzy utility difference for understanding preferential judgments. 91d:04009
- Novák, Vilém ★ Fuzzy sets and their applications. 91a:04007
- Ohta, Hiroshi<sup>1</sup> see Kanagawa, Akihiro, (Not in MR)
- Orlovskii, S. A. Decomposition of properties and definition of fuzzy set. 91d:04009
- Pappis, C. P. Value approximation of fuzzy systems variables. 91i:04010
- (with Adamopoulos, G. I.) A computer algorithm for the solution of the inverse problem of fuzzy systems. (Not in MR)
- Pardalos, Panos M. see Triantaphyllou, Evangelos; et al., (91h:04014)
- Pardo, Leandro see Gil Álvarez, Pedro Ángel; et al., 91g:04003
- Park, Kyung S. see Kim, Kuk, 91c:04007
- Pedrycz, Witold Inverse problem in fuzzy relational equations. 91d:04010
- Algorithms for solving fuzzy relational equations in a probabilistic setting. 91j:04007
- Relevancy of fuzzy models. 91g:04006
- Processing in relational structures: fuzzy relational equations. (Not in MR)
- see also Gottwald, Siegfried, 91d:04007
- Pomykala, Jacek (with Pomykala, Janusz A.) The Stone algebra of rough sets. (Russian summary) 91m:04004
- Pomykala, Janusz A. see Pomykala, Jacek, 91m:04004
- Ponsard, Claude Note on the ranking of fuzzy numbers: conditions for a total order relation. (Not in MR)
- Prade, Henri M. see Dubois, Didier, 91i:04006; (Not in MR) and (Not in MR)
- Qiao, Zhong On the extension of possibility measures. 91e:04001
- Qu, Yun Xia see Buckley, James J., 91h:04004; 91j:04004 and 91m:04003
- Que, Tai Lin see Wang, Ming Zhe, 91f:04011
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- Srivastava, Arun Kumar<sup>2</sup> Note on fuzzy uniformities induced by non-Archimedean metrics. 91h:54010
- *see also* Ali, Dewan Muslim; et al., 91j:54005
- Sun, J.-Q. (with Hsu, Chieh Su) Global analysis of nonlinear dynamical systems with fuzzy uncertainties by the cell mapping method. 91j:93066
- Świątalski, Zbigniew A note on fuzzy rational choice functions. 91e:90018
- Tada, Minoru (with Ishii, Hiroaki; Nishida, Toshio) Fuzzy transportation problem with integral flow. 91k:90059
- Tanaka, Hiroo *see* Hayashi, Isao, 91f:65216
- Tang, Wu Xiang Generalized grey model. 91j:93012
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- Valette, Robert *see* Cardoso, Janette; et al., (91k:68002)
- Verma, Rakesh Kumar Fuzzy geometric programming with several objective functions. 91k:90223
- Wang, Pei Zhuang (with Zhang, Hong Min; Xu, Wei) Pad-analysis of fuzzy control stability. 91j:93060
- *see also* Peng, Xian Tu; et al., 91k:68175 and Kandel, Abraham; et al., 91m:93006
- Wang, Shu Ji Fixed pansystems theorems and eigen-fuzzy sets. (Chinese. English summary) 91e:93003
- Wang, Zhen Yuan Absolute continuity and extension of fuzzy measures. 91e:28019
- (with Li, Shou Mei) Fuzzy linear regression analysis of fuzzy valued variables. 91h:62006
- (with Qiao, Zhong) Transformation theorems for fuzzy integrals on fuzzy sets. 91k:28026
- Warner, M. W. Fuzzy topology with respect to continuous lattices. 91k:06011
- Wen, Chun Yuan *see* Cai, Kai Yuan, (Not in MR)
- Weng, Wen Hui Bases of fuzzy linear spaces. (Chinese. English summary) 91a:46012
- Wu, Cong Xian (with Ma, Ming) Fuzzy norms, probabilistic norms and fuzzy metrics. 91k:46090
- Wu, Jian Rong<sup>2</sup> Separation properties in fuzzy bitopological spaces. (Chinese. English summary) (Not in MR)
- Wuyts, P. *see* Ali, Dewan Muslim; et al., 91j:54005
- Xiong, Qiu Si *see* Luo, An, (Not in MR)
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- Xuan, Li Xin  $N$ -sequential compactness. 91e:54013
- Yang, Le Cheng Characteristics of nice-compactness and the netwise Alexander subbase lemma. (Chinese. English summary) 91e:54023
- Yi, Yun The level characterization of the interior operator in induced spaces. (Not in MR)
- Zahedi, M. M. *see* Mashinch, Mashallah, 91j:20171
- Zeng, Huan Liang Fuzzy topological linear spaces of types (L) and (L\*). (Chinese. English summary) 91f:46108
- Zhang, Hong Min *see* Wang, Pei Zhuang; et al., 91j:93060
- Zhang, Shi Sheng (with Huang, Nan Jing) Fixed degrees for a class of fuzzy mappings. (Chinese. English summary) 91e:54024
- Zhang, Wen Xiu (with Li, Teng; Ma, Ji Feng; Li, Ai Jie) Set-valued measure and fuzzy set-valued measure. 91g:28028
- Zhang, Xiao Hong Comment: "Fuzzy BCK-algebras" [Math. Appl. 3 (1990), no. 1, 98–99] by W. H. Huang. (Chinese) (Not in MR)
- Zhang, Xing Dai Set series and fuzzy series. (Chinese. English summary) (Not in MR)
- Zhao, Bin Weights, characteristics and densities of derived spaces. (Chinese) (Not in MR)
- Zhao, Ming Qing Fuzzy linear programming problems for a class of fuzzy numbers with  $L$ -R type variables. (Chinese. English summary) (Not in MR)
- Items listed otherwise than by author
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Fuzzy sets and systems *see* Dubois, Didier, 91g:00004 and (Not in MR)
- 04A99 Miscellaneous topics**
- Baker, M. J. C. All swans are white: some remarks on the diagrams of Euler and Venn. 91k:40007
- Items with secondary classifications in 04A99
- Alling, Norman L. Fundamentals of analysis over surreal number fields. 91a:12001
- 05–XX Combinatorics {For finite fields, see 11Txx.}**
- 05–00 General reference works (handbooks, dictionaries, bibliographies, etc.)**
- Hedetniemi, Stephen T. (with Laskar, Renu C.) Bibliography on domination in graphs and some basic definitions of domination parameters. (Not in MR)
- Laskar, Renu C. *see* Hedetniemi, Stephen T., (Not in MR)
- 05–01 Instructional exposition (textbooks, tutorial papers, etc.)**
- (Bhansali, Anil) *see* Skiena, Steven S., 91g:05001
- (Birk, O.) *see* Vágó, István, 91h:05001
- (Boron, Leo F.) *see* Zykov, A. A., 91e:05003
- Cerasoli, Mauro (with Eugeni, Franco; Protasi, Marco) ★ Elementi di matematica discreta. (Italian) [Elements of discrete mathematics] 91m:05001
- (Christenson, C.) *see* Zykov, A. A., 91e:05003
- Eugeni, Franco *see* Cerasoli, Mauro; et al., 91m:05001
- Halle, Rudolf ★ Graphentheorie. (German) [Graph theory] 91e:05001
- Hartsfield, Nora (with Ringel, Gerhard) ★ Pearls in graph theory. 91f:05001
- Lipski, Witold ★ Kombinatoryka dla programistów. (Polish) [Combinatorics for programmers] 91c:05001
- Ore, Oystein ★ Graphs and their uses. 91e:05002
- Protasi, Marco *see* Cerasoli, Mauro; et al., 91m:05001
- Ringel, Gerhard *see* Hartsfield, Nora, 91f:05001

- (Rota, Gian-Carlo) *see* Cerasoli, Mauro; et al., 91m:05001  
 Skiena, Steven S. ★ Implementing discrete mathematics. 91g:05001  
 (Smith, B.) *see* Zykov, A. A., 91e:05003  
 Vágvölgyi, István ★ Graph theory. 91h:05001  
 Watkins, John J. *see* Wilson, Robin James, 91b:05001  
 Wilson, Robin James (with Watkins, John J.) ★ Graphs. 91b:05001  
 — *see also* Ore, Oystein, 91e:05002  
 Zykov, A. A. ★ Fundamentals of graph theory. 91e:05003

#### Items with secondary classifications in 05-01

- Biggs, Norman L. ★ Discrete mathematics. 91h:00002  
 Bosák, Juraj ★ Decompositions of graphs. 91i:05085  
 Carmen, Thomas H. (with Leiserson, Charles E.; Rivest, Ronald L.) ★ Introduction to algorithms. 91i:68001  
 Gould, Ronald J. ★ Graph theory. 91m:05057  
 Graham, Ronald L. (with Knuth, Donald E.; Patashnik, Oren) ★ Concrete mathematics. 91f:00001  
 Joshi, K. D. ★ Foundations of discrete mathematics. 91c:00003  
 Knuth, Donald E. *see* Graham, Ronald L.; et al., 91f:00001  
 Leiserson, Charles E. *see* Carmen, Thomas H.; et al., 91i:68001  
 Patashnik, Oren *see* Graham, Ronald L.; et al., 91f:00001  
 Rivest, Ronald L. *see* Carmen, Thomas H.; et al., 91i:68001  
 (Znám, Štefan) *see* Bosák, Juraj, 91i:05085

### 05-02 Research exposition (monographs, survey articles)

- (Barvinok, A. I.) *see* Stanley, Richard P., 91m:05002  
 Fisk, Steve ★ Coloring theories. 91h:05002  
 (Lodkin, A. A.) *see* Stanley, Richard P., 91m:05002  
 (Rota, Gian-Carlo) *see* Stanley, Richard P., 91m:05002  
 Stanley, Richard P. ★ Перечислительная комбинаторика. (Russian) [Enumerative combinatorics] 91m:05002  
 (Vershik, A. M.) *see* Stanley, Richard P., 91m:05002

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- Contemporary Mathematics *see* Fisk, Steve, 91h:05002

#### Items with secondary classifications in 05-02

- Alon, Noga Some recent combinatorial applications of Borsuk-type theorems. 91g:05002  
 Bhat-Nayak, Vasanti N. Powers and roots of graphs: a survey. 91c:05179

### 05-03 Historical (must also be assigned at least one classification number from Section 01)

#### Items with secondary classifications in 05-03

- Chu, Wen Chang Applications of formal power series techniques. I. An elementary proof of Shan Lan Li's identity. (Chinese) 91d:05011  
 Gu, Tong Xin (with Wallis, Walter D.) The development of combinatorics. (Bulgarian) 91j:01002  
 Lloyd, E. Keith Redfield's proofs of MacMahon's conjecture. (French and Chinese summaries) 91c:01043  
 (MacMahon, Percy Alexander) *see* Lloyd, E. Keith, 91c:01043  
 Martzloff, Jean-Claude Un exemple de mathématiques chinoises non triviales: les formules sommatoires linéaires de Li Shan Lan (1811–1882). (English summary) [An example of nontrivial Chinese mathematics: the finite summation formulas of Li Shan Lan (1811–1882)] 91m:01002  
 (Redfield, J. Howard) *see* Lloyd, E. Keith, 91c:01043  
 Rybníkov, K. A. An outline of the history of graph theory. (Russian. English summary) 91j:01005  
 Singal, M. K. Magic figures in ancient Hindu mathematics. 91h:01011  
 (Tonkov, Tonko) *see* Gu, Tong Xin, 91j:01002  
 Wallis, Walter D. *see* Gu, Tong Xin, 91j:01002

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##### Colloquium:

- Soviet Finite Mathematics ★ Colloquium on Soviet Finite Mathematics. 91e:01019

##### Discussion:

- Large-scale finite mathematics ★ Colloquium on Soviet Finite Mathematics. 91e:01019

### 05-04 Explicit machine computation and programs (not the theory of computation or programming)

- Eades, Peter (with Fogg, Iain; Kelly, David) SPREMB: a system for developing graph algorithms. 91b:05002  
 Fogg, Iain *see* Eades, Peter; et al., 91b:05002  
 Garavelli, John S. An algorithm for the multiplication of symmetric polynomials. 91f:05002  
 Huang, Yue Jiang A new algorithm for the generation of binary de Bruijn sequences. 91i:05001  
 Kelly, David *see* Eades, Peter; et al., 91b:05002  
 Marica, Dănuț Finding the cut-vertices of a graph. (Romanian summary) 91c:05002  
 Puccio, L. (with Ricca, G.) An enumerative algorithm for generating all nonisomorphic nondirected connected finite graphs. (Italian. English summary) 91b:05003  
 Ricca, G. *see* Puccio, L., 91b:05003

#### Items with secondary classifications in 05-04

- Cvetković, Dragoslav M. Discussing graph theory with a computer. VI. Theorems proved with the aid of the computer. 91b:05118  
 De Dominicis, Cyrano *see* Goldschmidt, Yadin Y., 91a:82072

- Du, Ding Zhu (with Zhang, Yanjun) On heuristics for minimum length rectilinear partitions. 91a:68263

- Eppstein, David (with Galil, Zvi; Giancarlo, Raffaele) Efficient algorithms with applications to molecular biology. 91a:68125

- Faaland, Bruce (with Kim, Ki Seog; Schmitt, Tom) A new algorithm for computing the maximal closure of a graph. 91a:90066

- Gall, Zvi *see* Eppstein, David; et al., 91a:68125

- Gambosi, Giorgio (with Postiglione, Alberto; Talamo, Maurizio) New algorithms for on-line bin packing. 91j:68051

- Giancarlo, Raffaele *see* Eppstein, David; et al., 91a:68125

- Goldschmidt, Yadin Y. (with De Dominicis, Cyrano) Replica symmetry breaking in the spin-glass model on lattices with finite connectivity: application to graph partitioning. 91a:82072

- Kim, Ki Seog *see* Faaland, Bruce; et al., 91a:90066

- Liu, Joseph W. H. A graph partitioning algorithm by node separators. (Not in MR)

- Mohar, Bojan Computing the characteristic polynomial of a tree. 91a:05034

- Postiglione, Alberto *see* Gambosi, Giorgio; et al., 91j:68051

- Schmitt, Tom *see* Faaland, Bruce; et al., 91a:90066

- Sprugnoli, Renzo On the approximation of Catalan numbers and other quantities. 91f:11089

- Talamo, Maurizio *see* Gambosi, Giorgio; et al., 91j:68051

- Zerovnik, Janez A randomised heuristic algorithm for graph colouring. 91b:05084

- Zhang, Yanjun *see* Du, Ding Zhu, 91a:68263

### 05-06 Proceedings, conferences, collections, etc.

- (Aigner, Martin) *see* Combinatorics of ordered sets, 91m:05004  
 (Bodendiek, Rainer) *see* Topics in combinatorics and graph theory, 91m:05005  
 (Borowiecki, Mieczysław) *see* Combinatorics and graph theory, 91k:05001  
 (Hahn, Géra) *see* Cycles and rays, 91k:05002  
 (Hansen, Pierre) *see* ARIDAM, 91m:05003  
 (Henn, Rudolf) *see* Topics in combinatorics and graph theory, 91m:05005  
 (Jaworski, Jerzy) *see* Random graphs '87, 91i:05002  
 (Karoński, Michał) *see* Random graphs '87, 91i:05002  
 (Ray-Chaudhuri, D. K.) *see* Coding theory and design theory, 91a:05001  
 (Ringel, Gerhard) *see* Topics in combinatorics and graph theory, 91m:05005  
 (Ruciński, Andrzej) *see* Random graphs '87, 91i:05002  
 (Rybníkov, K. A.) *see* Combinatorial analysis, 91e:05004  
 (Sabidussi, Gert) *see* Cycles and rays, 91k:05002  
 (Shen, Hao) *see* Combinatorial designs and applications, 91h:05003  
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 (Wille, Rudolf) *see* Combinatorics of ordered sets, 91m:05004  
 (Woodrow, Robert E.) *see* Cycles and rays, 91k:05002  
 (Zhu, Lie) *see* Combinatorial designs and applications, 91h:05003

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##### Advanced Research Institute:

- Discrete Applied Mathematics ★ ARIDAM III. 91m:05003

- ARIDAM ★ ARIDAM III. 91m:05003

- Coding theory and design theory ★ Coding theory and design theory. Part II. 91a:05001

- Combinatorial analysis ★ Комбинаторный анализ. Вып. 8. (Russian) [Combinatorial analysis. No. 8] 91e:05004

- Combinatorial designs and applications ★ Combinatorial designs and applications. 91h:05003

- Combinatorics and graph theory ★ Combinatorics and graph theory. 91k:05001

- Combinatorics of ordered sets ★ Combinatorics of ordered sets. 91m:05004

##### Conference:

- Combinatorial Designs and Applications ★ Combinatorial designs and applications. 91h:05003

- Combinatorics of Ordered Sets ★ Combinatorics of ordered sets. 91m:05004

- Cycles and rays ★ Cycles and rays. 91k:05002

- Huangshan ★ Combinatorial designs and applications. 91h:05003

##### Meeting:

- Graph Theory ★ Topics in combinatorics and graph theory. 91m:05005

- Montreal, PQ ★ Cycles and rays. 91k:05002

##### NATO Advanced Research Workshop:

- Cycles and Rays: Basic Structures in Finite and Infinite Graphs ★ Cycles and rays. 91k:05002

- New Brunswick, NJ ★ ARIDAM III. 91m:05003

- Oberwolfach ★ Topics in combinatorics and graph theory. 91m:05005

- ★ Combinatorics of ordered sets. 91m:05004

- Poznań ★ Random graphs '87. 91i:05002

- Random graphs '87 ★ Random graphs '87. 91i:05002

##### Seminar:

- Random Graphs and Probabilistic Methods in Combinatorics ★ Random graphs '87. 91i:05002

- Topics in combinatorics and graph theory ★ Topics in combinatorics and graph theory. 91m:05005

- Warsaw ★ Combinatorics and graph theory. 91k:05001

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- (Albrecht, R.) *see* Computational graph theory, 91a:68002  
 (Cook, William J.) *see* Polyhedral combinatorics, 91k:90011  
 (Deza, Michel-Marie) *see* Algebraic, extremal and metric combinatorics, 1986, 91a:00021  
 (Frankl, Peter) *see* Algebraic, extremal and metric combinatorics, 1986, 91a:00021  
 (Hansen, Pierre) *see* Colloquium: Pseudo-Boolean Optimization and Related Topics, 91g:00041  
 (Kramer, Earl S.) *see* Finite geometries and combinatorial designs, 91g:00042



- (Magliveras, Spyros S.) *see* Finite geometries and combinatorial designs. 91g:00042  
 (Mayr, Ernst W.) *see* Computational graph theory. 91h:68002  
 (Nagl, M.) *see* Graph-theoretic concepts in computer science. 91h:68006  
 (Nolte, Hartmut) *see* Computational graph theory. 91a:68002  
 (Rosenberg, Ivo G.) *see* Algebraic, extremal and metric combinatorics. 1986. 91a:00021  
 (Seymour, Paul D.) *see* Polyhedral combinatorics. 91h:90011  
 (Syslo, Maciej M.) *see* Computational graph theory. 91a:68002  
 (Tinhofer, G.) *see* Computational graph theory. 91a:68002  
 (de Werra, Dominique) *see* Colloquium: Pseudo-Boolean Optimization and Related Topics. 91g:00041

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**Algebraic, extremal and metric combinatorics, 1986** ★ Algebraic, extremal and metric combinatorics. 1986. 91a:00021

**Chesbres** ★ First International Colloquium on Pseudo-Boolean Optimization and Related Topics. 91g:00041

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**Pseudo-Boolean Optimization and Related Topics** ★ First International Colloquium on Pseudo-Boolean Optimization and Related Topics. 91g:00041

**Computational graph theory** ★ Computational graph theory. 91a:68002

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**Contemporary Mathematics** ★ Finite geometries and combinatorial designs. 91g:00042

**Finite geometries and combinatorial designs** ★ Finite geometries and combinatorial designs. 91g:00042

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**Kerkrade** ★ Graph-theoretic concepts in computer science. 91h:68006

**Lecture Notes in Computer Science** ★ Graph-theoretic concepts in computer science. 91h:68006

**Lincoln, NE** ★ Finite geometries and combinatorial designs. 91g:00042

**Montreal, PQ** ★ Algebraic, extremal and metric combinatorics. 1986. 91a:00021

**Morris, NJ** ★ Polyhedral combinatorics. 91h:90011

**Polyhedral combinatorics** ★ Polyhedral combinatorics. 91h:90011

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## 05Axx Classical combinatorial problems

**Chu, Wen Chang** A reverse derivation for Gould-Hsu inversions and some comments. (Chinese) (Not in MR)

## 05A05 Combinatorial choice problems (subsets, representatives, permutations)

**Ahlswede, Rudolf** (with Zhang, Zhen) On cloud-antichains and related configurations. 91h:05003

**Alon, Noga** Some recent combinatorial applications of Borsuk-type theorems. 91g:05002 — (with Caro, Yair; Tuza, Zoltan) Sub-Ramsey numbers for arithmetic progressions. 91c:05003

**Behrendt, Gerhard** Products of cyclic permutations. 91h:05004

**Bertram, Edward A.** (with Gordon, Basil) Counting special permutations. 91h:05004

**Cameron, Peter J.** Metric and geometric properties of sets of permutations. (see 91a:00021)

**Caro, Yair** *see* Alon, Noga; et al. 91c:05003

**Clark, Dean S.** (with Lewis, James T.) Circular avoiding-sequences with minimum sum. 91c:05004

**Dowdy, James** (with Mays, Michael E.) Josephus permutations. 91a:05002

**Erdős, Paul** Some of my old and new combinatorial problems. 91j:05001

**Fishburn, Peter C.** (with Gehrlein, William V.) The three-permutations problem. 91a:05003

**Frankl, Peter** Intersection and containment problems without size restrictions. 91h:05003

— (with Füredi, Zoltán; Kalai, Gil) Shadows of colored complexes. 91h:05005

— (with Graham, Ronald L.) Old and new proofs of the Erdős-Ko-Rado theorem. (Chinese summary) 91h:05005

— Intersection theorems and mod  $p$  rank of inclusion matrices. 91h:05006

— Canonical antichains on the circle and applications. 91f:05003

**Füredi, Zoltán** (with Kahn, Jeff; Kleitman, Daniel J.) Sphere coverings of the hypercube with incomparable centers. 91h:05004

— *see also* Frankl, Peter; et al. 91h:05005

**Galić, Radosław**  $RN$ - $k$ -seminets of maximal degree. (Macedonian summary) (Not in MR)

**Gehrlein, William V.** *see* Fishburn, Peter C. 91a:05003

**Gillis, J.** The statistics of derangement—a survey. 91h:05005

— (with Ismail, Mourad E. H.; Offer, T.) An asymptotic problem in derangement theory. 91f:05004

**Goldreich, Oded** On the number of monochromatic close pairs of beads in a rosary. 91c:05006

**Gordon, Basil** *see* Bertram, Edward A. 91h:05004

**Graham, Ronald L.** *see* Frankl, Peter. 91h:05005

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**Hajela, Dan** On the discrepancy of coloring finite sets. 91m:05006a

— Corrigendum: "On the discrepancy of coloring finite sets". 91m:05006b

**Han, Guo-Niu** Une nouvelle bijection pour la statistique de Denert. (English summary) [A new bijection for Denert's statistic] 91c:05007

**Hill, Raymond** Cricket competitions and random derangements. (Not in MR)

**Hou, Shi Zhong** Some combinatorial problems. (Chinese. English summary) 91j:05002

**Ismail, Mourad E. H.** *see* Gillis, J.; et al. 91f:05004

**Kahn, Jeff** *see* Füredi, Zoltán; et al. 91h:05004

**Kalai, Gil** *see* Frankl, Peter; et al. 91h:05005

**Kleitman, Daniel J.** *see* Füredi, Zoltán; et al. 91h:05004

**Knauf, Donald E.** (with Motwani, Rajeev; Pittel, Boris) Stable husbands. 91m:05007

**Kobayakawa, Y.** A note on kernels of intersecting families. 91a:05004

**Kostochka, A. V.** Maximal capacity of the boundary of the Sperner family. 91h:05007

**Kovács, Béla** On a computer solution of a combinatorial problem. (Hungarian. English summary) 91c:05008

**Lewis, James T.** *see* Clark, Dean S. 91c:05004

**Marcu, Dănuț** A short proof of a theorem of Kleitman. (Serbo-Croatian summary) 91h:05005

**Mays, Michael E.** *see* Dowdy, James. 91a:05002

**Mitchell, Christopher J.** Another postage stamp problem. 91a:05005

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**Nováč, Jiří** On cyclic representations of triples by pairs. 91m:05008

**Offer, T.** *see* Gillis, J.; et al. 91f:05004

**Panayotopoulos, A.** Permutations planaires généralisées. (English summary) [Generalized planar permutations] 91f:05005

**Pilpel, Shaly** Descending subsequences of random permutations. 91d:05001

**Pittel, Boris** *see* Knauf, Donald E.; et al. 91m:05007

**Rawlings, Dun** Multicolored Simon Newcomb problems. 91h:05008

**Renaud, J.-C.** *see* Sarvate, D. G. 91h:05006

**Ruskey, Frank** Transposition generation of alternating permutations. 91d:05002

**Sarkaria, K. S.** A generalized Kneser conjecture. 91g:05003

**Sarvate, D. G.** (with Renaud, J.-C.) Improved bounds for the union-closed sets conjecture. 91h:05006

**Schrage, Georg** Ein Geburtstagsproblem. [A birthday problem] 91j:05003

**Shan, Zan** Shortest strings containing all  $k$ -element permutations. (Chinese. English summary) 91h:05007

**Simion, Rodica E.** Finite automata for languages of combinatorial interest: an order theoretical point of view. 91c:05009

**Tan, Jimmy J. M.** A necessary and sufficient condition for the existence of a complete stable matching. 91h:05008

**Turosyán, B. E.** On the number of  $\{F\}$ -separable subsets in finite sets. (Russian. Armenian summary) 91g:05004

**Tuza, Zoltan** ★ Helly property in finite set systems. 91h:05009

— *see also* Alon, Noga; et al. 91c:05003

**Wang, Tian Mu** Simple proofs of some theorems on permutations. (Chinese) 91h:05006

**Wilson, Richard M.** A diagonal form for the incidence matrices of  $t$ -subsets vs.  $k$ -subsets. 91h:05010

**Yakovlev, S. V.** (with Grebennik, I. V.) Properties of Euclidean combinatorial sets of  $k$ -

arrangements with and without repetitions. (Russian) 91h:05009

**Yakovlev, A. L.** Permutations with cycle lengths in a given set. 91h:05005

**Zha, Xiao Ya** On a conjecture on the Sperner property. 91h:05010

**Zhang, Zhen** *see* Ahlswede, Rudolf. 91h:05003

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**Alekseev, V. B.** The number of families of subsets that are closed with respect to intersections. (Russian) 91d:05005

**Alon, Noga** Generating pseudo-random permutations and maximum flow algorithms. 91g:68069

**Ball, Michael O.** (with Derigs, Ulrich; Hilbrand, C.; Metz, Achim) Matching problems with generalized upper bound side constraints. 91h:90068

**Bezrukov, S. L.** Minimization of shadows of subsets of a semilattice of partial mappings. (Russian) 91h:90158

**Brenner, J. L.** Foundations of the theory of permutations. 91j:20005

**Clarke, Robert John** Covering a set by subsets. 91h:05060

**Derigs, Ulrich** *see* Ball, Michael O.; et al. 91h:90068

**Fabris, Francesco** A lower bound on the expected complexity in the set of  $n$ -tuples of given weight. 91h:94021

**Fofanova, T.** On the stability of marriages. (see 91h:08001)

**Frankl, Peter** An intersection problem for codes. 91h:94050

**Hilbrand, C.** *see* Ball, Michael O.; et al. 91h:90068

**Jaballah, A.** Generating radical monomial ideals. 91m:13002

**Jia, Xing De** On a combinatorial problem. (Chinese. English summary) 91h:11015

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Frailssé, Roland (with Lopez, Gérard) ★ La reconstruction d'une relation dans l'hypothèse forte: isomorphisme des restrictions à chaque partie stricte de la base. (French) [Reconstructing a relation under the strong hypothesis: isomorphism of the restrictions to every proper subset of the base] 91f:04001

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 Biedenharn, L. C. (with Louck, J. D.) A new class of symmetric polynomials defined in terms of tableaux. 91c:05189  
 Briesnohl, Dieter (with Laue, Hartmut) On Witt's dimension formula for free Lie algebras and a theorem of Klyachko. 91g:17007  
 Draayer, J. P. *see* Lopez-Peña, R.; et al., 91h:81048  
 Garsia, Adriano M. (with Reutenauer, Christophe) A decomposition of Solomon's descent algebra. 91c:20007  
 — *see also* Bergeron, François; et al., 91j:17005  
 Goulden, I. P. The number of involutions with  $r$  fixed points and a long increasing subsequence. 91m:05180  
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 Krattenthaler, Christian A determinant evaluation and some enumeration results for plane partitions. 91m:05013  
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 Littlmann, Peter A generalization of the Littlewood-Richardson rule. 91f:22023  
 Lopez-Peña, R. (with Hess, P. O.; Rochford, P.; Draayer, J. P.) Young diagrams as Kronecker products of symmetric or antisymmetric components. 91h:81048  
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 Nimmo, J. J. C. Hall-Littlewood symmetric functions and the BKP equation. 91g:05136  
 Okada, Seichi Wreath products by the symmetric groups and product posets of Young's lattices. 91i:20014

Oliveira-Martins, M. Teresa F. On homomorphisms between Weyl modules for hook partitions. 91d:20046

Pragacz, Piotr (with Weyman, Jerzy) On the generic free resolutions. 91c:13012

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Stembridge, John R. Nonintersecting paths, Pfaffians, and plane partitions. 91h:05014

Sundaram, Sheila Tableaux in the representation theory of the classical Lie groups. 91c:23022

Thompson, Robert C. Divisibility relations satisfied by the invariant factors of a matrix product. 91h:15020

Tokuyama, Takeshi On a relation between the representations of general linear groups and a symplectic group. (see 91m:06023)

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White, Dennis E. Hybrid tableaux and the Littlewood-Richardson rule. 91c:20025

## 05E15 Combinatorial problems concerning the classical groups [see also 22E45, 33C80]

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Berenstein, A. D. (with Zelevinskii, A. V.) Tensor product multiplicities and convex polytopes in partition space. 91c:17003

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Kirillov, A. A. A remark on the Gel'fand-Tsetlin patterns for symplectic groups. 91c:22005

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— Solution of a Sperner conjecture of Stanley with a construction of Gel'fand. 91g:05137

Solomon, Louis The number of irreducible representations of a finite Coxeter group. 91j:20101

Sutherland, David C. The automorphism groups of the strong Bruhat order of the Coxeter groups  $B_n$  and  $D_n$ . 91d:20039

Zelevinskii, A. V. see Berenstein, A. D., 91c:17003

## 05E20 Group actions on designs, geometries and codes

Items with secondary classifications in 05E20

Chakravarti, I. M. Families of codes with few distinct weights from singular and nonsingular Hermitian varieties and quadrics in projective geometries and Hadamard difference sets and designs associated with two-weight codes. 91c:51007

## 05E25 Group actions on posets and homology groups of posets [see also 06A09]

Bezrukov, S. L. (with Voronin, V. P.) Extremal ideals of the lattice of multisets for symmetric functionals. (Russian) 91d:05092

Björner, Anders The Möbius function of subword order. 91c:05200

Kim, Dae San (with Rabau, Patrick) Action on Grassmannians associated with commutative semisimple algebras. 91j:05102

Proctor, Robert A. Product evaluations of Lefschetz determinants for Grassmannians and of determinants of multinomial coefficients. 91c:05201

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Rabau, Patrick see Kim, Dae San, 91j:05102

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Björner, Anders (with Wachs, Michelle L.)  $q$ -hook length formulas for forests. 91c:05013

Budach, Lothar (with Graw, Bernd; Meinel, Christoph; Waack, Stephan) ★ Algebraic and topological properties of finite partially ordered sets. 91h:06007

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Greene, John Greedy matching in Young's lattice. 91h:06005

Hibi, Takayuki A numerical characterization of Gorenstein complexes. 91h:13020

Marencik, E. E. Multiplicative functions of locally finite partially ordered sets. Criteria for multiplicativity. 91d:06004

Meinel, Christoph see Budach, Lothar; et al., 91h:06007

Misra, Kailash C. (with Putcha, Mohan S.; Singh, Daya S.) Transitive maps from posets to Dynkin diagrams. 91h:06003

Mnukha, V. B. The Möbius algebra for a Desarguesian geometric lattice. (Russian) 91j:06016

Putcha, Mohan S. see Misra, Kailash C.; et al., 91h:06003

Singh, Daya S. see Misra, Kailash C.; et al., 91h:06003

Smith, Dean E. On the Cohen-Macaulay property in commutative algebra and simplicial topology. 91f:52020

Stanley, Richard P. Variations on differential posets. 91h:06004

Villarreal, Rafael H. Cohen-Macaulay graphs. 91h:13031

Waack, Stephan see Budach, Lothar; et al., 91h:06007

Wachs, Michelle L. see Björner, Anders, 91c:05013

## 05E30 Association schemes, strongly regular graphs

Bhattacharya, Prabir see Mesner, Dale M., 91j:05103

Bier, Thomas Totient numbers of an arithmetic progression in a hypercube: the coprime case. 91h:05124

— Totient-numbers of the rectangular association scheme. 91h:05125

Brouwer, Andries E. (with Ivanov, Andrei Vladimirovich; Klin, M. Kh.) Some new strongly regular graphs. 91f:05120

— A remark on association schemes with two  $P$ -polynomial structures. 91h:05171

Diwanji, S. M. see Vartak, M. N., 91a:05097

Fack, V. Computer assisted classification of strongly regular graphs. 91d:05093

Hartnell, Bert L. (with Jeans, Neville; Kocay, William) Parameter sets for a class of strongly regular graphs. 91c:05202

Huang, Hua Min 2-class subschemes of rational  $G$ -schemes. 91f:05121

Hultquist, Robert A. see Suchower, Lisa J., 91g:05138

Huo, Yuan Ji see Wan, Zhe Xian, (Not in MR)

Ivanov, Andrei Vladimirovich see Brouwer, Andries E.; et al., 91f:05120

Iwakata, Yasushi Minimal subschemes of the group association schemes of Mathieu groups. 91h:05123

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Klin, M. Kh. see Brouwer, Andries E.; et al., 91f:05120

Kocay, William see Hartnell, Bert L.; et al., 91c:05202

Leonard, Douglas A. Directed distance regular graphs with the  $Q$ -polynomial property. 91h:05126

Mesner, Dale M. (with Bhattacharya, Prabir) Association schemes on triples and a ternary algebra. 91j:05103

Munemasa, Akihiro Splitting fields of association schemes. 91m:05184

Neumaier, Arnold Krein conditions and near polygons. 91h:05124

Suchower, Lisa J. (with Hultquist, Robert A.) A new property of the association matrices for EGD and hypercubic association schemes. 91g:05138

Vartak, M. N. (with Diwanji, S. M.) Uniqueness of some 4-associate schemes. 91a:05097

Wan, Zhe Xian (with Huo, Yuan Ji) Nonsymmetric association schemes for symmetric matrices. (Chinese) (Not in MR)

Yin, Paul Y. H. Strongly regular graphs and Hurwitz-Radon numbers. 91h:05125

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Bannai, Eichi Character tables of commutative association schemes. 91k:20010

— (with Shen, Hao; Song, Sung-Yell) Character tables of the association schemes of finite orthogonal groups acting on the nonisotropic points. 91k:20047

Huda, S. see Shafig, M., 91g:05138

Numura, Kazumasa Intersection diagrams of distance-biregular graphs. 91m:05075

Shafig, M. (with Huda, S.) On application of association matrices in the analysis of fourth-order rotatable designs. 91g:05138

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Voloshchenko, Yu. V. Computer calculation of subschemes of relation schemes of Coxeter groups of type  $B_n$ . (Russian) 91m:20060

Wei, Wan Di see Yang, Ben Fu, 91k:05027

Yang, Ben Fu (with Wei, Wan Di) Finite vector spaces and block designs. 91k:05027

## 05E35 Orthogonal polynomials [see also 33C45, 33C50, 33D45]

Zeng, Jiang Linéarisation de produits de polynômes de Meixner, Krawtchouk, et Charlier. (English summary) [Linearization of products of Meixner, Krawtchouk and Charlier polynomials] 91g:05139

Items with secondary classifications in 05E35

Labelle, Jacques (with Yeh, Yeong Nan) Combinatorial proofs of some limit formulas involving orthogonal polynomials. 91g:33008

Schott, René Combinatorial techniques in computer science. 91h:68016

Yeh, Yeong Nan see Labelle, Jacques, 91g:33008

## 05E99 None of the above, but in this section

Azzema, Luigi (with Piras, Francesco) Incidence algebras and coalgebras of decomposition structures. 91d:05094

Huang, Rosa Q. Invariants of sets of linear varieties. 91h:05126

Piras, Francesco see Azzema, Luigi, 91d:05094

Items with secondary classifications in 05E99

Foata, Dominique (with Zeilberger, Doron) Denert's permutation statistic is indeed Euler-Mahonian. 91h:05016

Han, Gao-Niu Distribution Euler-mahonienne: une correspondance. (English summary) [Euler-Mahonian distribution: a correspondence] 91h:05012

Zeilberger, Doron see Foata, Dominique, 91h:05016

## 06-XX Order, lattices, ordered algebraic structures [see also 18B35]

### 06-01 Instructional exposition (textbooks, tutorial papers, etc.)

Davey, B. A. (with Priestley, H. A.) ★ Introduction to lattices and order. 91h:06001

Priestley, H. A. see Davey, B. A., 91h:06001

### 06-02 Research exposition (monographs, survey articles)

Igoshin, V. I. (with Mikhailov, A. V.; Sali, V. N.; Skornikov, L. A.) Concrete lattices. (Russian) 91a:06001

Mikhailov, A. V. see Igoshin, V. I.; et al., 91a:06001

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Skornikov, L. A. see Igoshin, V. I.; et al., 91a:06001

Items with secondary classifications in 06-02

(Barvinok, A. I.) see Stanley, Richard P., 91m:05002



- Faigle, Ulrich (with Schrader, Rainer) Orders and graphs. (German summary) 91d:05085  
 (Lodkin, A. A.) see Stanley, Richard P., 91m:05002  
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 Stanley, Richard P. ★ Перечислительная комбинаторика. (Russian) [Enumerative combinatorics] 91m:05002  
 (Vershik, A. M.) see Stanley, Richard P., 91m:05002

## 06-04 Explicit machine computation and programs (not the theory of computation or programming)

Items with secondary classifications in 06-04

- Felsner, Stefan A 3/2-approximation algorithm for the jump number of interval orders. 91g:68128  
 Miller, William David A computer program for orthomodular lattices. 91a:06012

## 06-06 Proceedings, conferences, collections, etc.

(Martinez, Jorge<sup>2</sup>) see Ordered algebraic structures, 91i:06001

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- Ordered Algebraic Structures ★ Ordered algebraic structures. 91i:06001  
 Curaçao ★ Ordered algebraic structures. 91i:06001  
 Ordered algebraic structures ★ Ordered algebraic structures. 91i:06001

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- (Aigner, Martin) see Combinatorics of ordered sets, 91m:05004  
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 Lisbon ★ Lattices, semigroups, and universal algebra. 91h:00030  
 Oberwolfach ★ Combinatorics of ordered sets. 91m:05004

## 06Axx Ordered sets

### 06A05 Total order

- Bonnet, R. (with Duffus, D.; Woodrow, Robert E.) Coloring chains. 91d:06001  
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 Fofanova, T. On the stability of marriages. (see 91h:08001)  
 Szegedy, Jenő On well-ordered mono-unary algebras. 91m:06001  
 Van Cutsem, Bernard Minimal superior ultrametrics under order constraint. 91f:06001  
 Woodrow, Robert E. see Bonnet, R.; et al., 91d:06001

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- Alling, Norman L. (with Swartz, Timothy A.) Monomorphisms of inductive number systems. 91k:04001  
 Chameni-Nembua, C. Règle majoritaire et distributivité dans le permutohédon. [Majority rule and distributivity in the "permutohedron"] 91f:90019  
 Clote, Peter G. The metamathematics of scattered linear orderings. 91h:03084  
 Downey, Rodney G. (with Moses, Michael F.) Recursive linear orders with incomplete successivities. 91k:03115  
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 Leeb, Klaus (with Pirillo, Giuseppe) Shuffle-compatible total orders. 91d:05013  
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 Sitnikov, D. E. (with Shabanov-Kushnarenko, Yu. P.) Some properties of order predicates. (Russian) 91f:04003  
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 Vereshchagin, N. K. A new proof of the decidability of the elementary theory of linearly ordered sets. 91h:03018

### 06A06 Partial order, general

- Abian, Alexander A partial order generalization of Alexander's subbase theorem. 91f:06002  
 Adams, M. E. (with Gould, Matthew) Corrigendum: "Posets whose monoids of order-preserving maps are regular" [Order 6 (1989), no. 2, 195-201; MR 90m:06002]. 91j:06001  
 Bandelt, Hans-Jürgen (with Rival, Ivan) Diagrams, orientations, and varieties. 91i:06002  
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- Bollerhoff, Ulrich On well-quasi-ordering finite sequences. 91h:06001  
 Bondarenko, V. M. (with Zavadskii, A. G.) Criteria for tameness and finiteness of growth for partially ordered sets with an equivalence relation. (Russian) 91m:06002  
 Boyle, Ann K. see Lau, William G.; et al., 91g:06002  
 Chen, Ren Di Relations between partially ordered sets and partially ordered set algebras. (Chinese. English summary) 91a:06002  
 Dacík, Rade M. Common fixed points and fixed edges for monotone mappings in posets. 91h:06002  
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 Lau, William G. (with Teply, Mark L.; Boyle, Ann K.) The deviation, density, and depth of partially ordered sets. 91g:06002  
 Lemmert, Roland (with Volkman, Peter) Un théorème du point fixe dans les ensembles ordonnés. [A fixed-point theorem for ordered sets] 91h:06003  
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 Misra, Kailash C. (with Putcha, Mohan S.; Singh, Daya S.) Transitive maps from posets to Dynkin diagrams. 91h:06003  
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 Nowakowski, Richard (with Rival, Ivan; Urrutia, Jorge) Representing orders on the plane by translating points and lines. 91f:06004  
 Piotrowski, Wiktor On  $k$ -saturated linear extensions of a partially ordered set. 91h:06004  
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- Baranga, Andrei Z-topologies. I. 91c:54003  
 Behrendt, Gerhard Automorphism groups of comparability and covering graphs. 91j:20007  
 Block, Henry W. (with Chhetry, D.; Fang, Zhao Ben; Sampson, Allan R.) Partial orders on permutations and dependence orderings on bivariate empirical distributions. 91m:62086  
 Cattaneo, Gianpiero (with Nisticò, Giuseppe) Brouwer-Zadeh posets and three-valued Lukasiewicz posets. 91h:03105  
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 Charpin, Pascale Codes cycliques étendus affines-invariants et antichains d'un ensemble partiellement ordonné. (English summary) [Affine-invariant extended cyclic codes and antichains of a partially ordered set] 91c:94030  
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 Fleischer, Isidore Order-convergence in posets. 91c:54007  
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 Golumbic, Martin Charles (with Scheinerman, Edward R.) Containment graphs, posets, and related classes of graphs. 91g:05109  
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 Harvey, Lawrence (with Roberts, Fred S.) On the theory of meaningfulness of ordinal comparisons in measurement. II. 91d:92007  
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 Martens, Hans (with de Muynck, Willem M.) Nonideal quantum measurements. 91k:81019

- McKee, Terry A. Upper bound multigraphs for posets. 91m:05158
- de Muynck, Willem M. *see* Martens, Hans, 91k:31019
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- Noltemeier, Hartmut Dynamic partial orders and generalized heaps. (German summary) 91c:68030
- Pionka, Jerzy The sum of a partially ordered system of graphs. I. 91a:05035
- Polinski, G. E. The model completion of the theory of all partially ordered sets. 91a:03081
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- Spreen, Dieter Computable one-to-one enumerations of effective domains. 91c:03048
- Sukhinin, M. F. Solvability of equations in partially ordered sets and semimetric spaces. 91b:54090
- Tasković, Milan R. Minimax theorems on posets with applications. 91k:49012
- Tolstosheina, S. V. On the semigroup of closure operations. 91a:20074
- Vershik, A. M. Topological problems in combinatorial and convex geometry and the theory of representations of partially ordered sets. (Russian) 91j:52001
- Vrancken-Mawet, L. *see* Hansoul, G., 91h:06010

## 06A07 Combinatorics of partially ordered sets

- Bayoumi, Bayoumi I. (with El-Zahar, Mohamed H.; Khamis, Soheir M.) Asymptotic enumeration of  $N$ -free partial orders. 91k:06003
- Beck, István Partial orders and the Fibonacci numbers. 91a:06005
- Beers, Donna (with Hunter, Roger; Richman, Fred; Walker, Elbert A.) Computing valuated trees. 91f:06005
- Bouchitte, V. (with Habib, Michel) The calculation of invariants for ordered sets. 91c:06008
- Czyżowicz, Jurek (with Pelc, Andrzej; Rival, Ivan) Drawing orders with few slopes. 91j:06004
- Lattice diagrams with few slopes. 91k:06004
- El-Zahar, Mohamed H. *see* Bayoumi, Bayoumi I.; et al., 91k:06003
- Ewacha, Kevin (with Fishburn, Peter C.; Gehrein, William V.) Linear extension majority cycles in height-1 orders. 91g:06004b
- Fishburn, Peter C. Thicknesses of ordered sets. 91h:06005
- *see also* Gehrein, William V., 91g:06004a and Ewacha, Kevin; et al., 91g:06004b
- Fomin, S. V. A duality theorem for partially ordered sets: algorithms. (Russian) 91m:06004
- Gambosi, Giorgio (with Nešetřil, Jaroslav; Talamo, Maurizio) On locally presented posets. 91g:06003
- Gehrein, William V. (with Fishburn, Peter C.) Linear extension majority cycles for small ( $n \leq 9$ ) partial orders. 91g:06004a
- *see also* Ewacha, Kevin; et al., 91g:06004b
- Ginsburg, John On the  $n$ -cutset property. 91b:06005
- Greene, John Greedy matching in Young's lattice. 91k:06005
- Habib, Michel *see* Bouchitte, V., 91c:06008
- Hedetniemi, Stephen T. *see* Lalani, J.; et al., 91k:06006
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- Khamis, Soheir M. *see* Bayoumi, Bayoumi I.; et al., 91k:06003
- Kierstead, H. A. (with Penrice, S. G.) Computing the dimension of  $N$ -free ordered sets is NP-complete. 91c:06007
- (with Trotter, W. T.) The number of depth-first searches of an ordered set. 91d:06005
- Křiz, Igor (with Thomas, Robin) On well-quasi-ordering finite structures with labels. 91f:06004
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- Laskar, Renu C. *see* Lalani, J.; et al., 91k:06006
- Martin, Ursula A geometrical approach to multiset orderings. 91b:06006
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- Nowakowski, Richard (with Parker, Andrew) Ordered sets, pagenumbers and planarity. 91j:06005
- Parker, Andrew *see* Nowakowski, Richard, 91j:06005
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- Penrice, S. G. *see* Kierstead, H. A., 91c:06007
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Tararin, V. M. Semi-uniformly ordered loops. (Russian. English summary) (see 91e:53003)

Teichler, Helga Halbgeordnete Ternärkörper. [Partially ordered ternary fields] 91c:51023

Testor, V. A. Ordered three-sorted quasigroups. (Russian. English summary) (see 91e:53003)

## 08-XX General algebraic systems

### 08-01 Instructional exposition (textbooks, tutorial papers, etc.)

Items with secondary classifications in 08-01

Cerasoli, Mauro (with Eugeni, Franco; Protasi, Marco) ★ Elementi di matematica discreta. (Italian) [Elements of discrete mathematics] 91m:05001

Eugeni, Franco *see* Cerasoli, Mauro; et al., 91m:05001

Protasi, Marco *see* Cerasoli, Mauro; et al., 91m:05001

(Rota, Gian-Carlo) *see* Cerasoli, Mauro; et al., 91m:05001

### 08-02 Research exposition (monographs, survey articles)

Artamonov, V. A. Universal algebras. (Russian) 91c:08001

### 08-04 Explicit machine computation and programs (not the theory of computation or programming)

Items with secondary classifications in 08-04

Pedersen, John Computer solution of word problems in universal algebra. 91e:08001

### 08-06 Proceedings, conferences, collections, etc.

(Halkowska, Katarzyna) *see* Universal and applied algebra, 91h:08001

(Stawski, Bogusław) *see* Universal and applied algebra, 91h:08001

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Symposium:

Universal Algebra ★ Universal and applied algebra. 91h:08001

Tarawa ★ Universal and applied algebra. 91h:08001

Universal and applied algebra ★ Universal and applied algebra. 91h:08001

Items with secondary classifications in 08-06

(Almeida, Jorge) *see* Lattices, semigroups, and universal algebra, 91h:00030

(Bergman, Clifford) *see* Algebraic logic and universal algebra in computer science, 91g:03005

(Bordalo, Gabriela) *see* Lattices, semigroups, and universal algebra, 91h:00030



(Dwinger, Philip) *see* Lattices, semigroups, and universal algebra, 91h:00030  
(Maddux, Roger D.) *see* Algebraic logic and universal algebra in computer science, 91g:03005  
(Piguzzi, D. L.) *see* Algebraic logic and universal algebra in computer science, 91g:03005

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**Conference:**  
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Lattices, Semigroups, and Universal Algebra ★ Lattices, semigroups, and universal algebra. 91h:00030

Lattices, semigroups, and universal algebra ★ Lattices, semigroups, and universal algebra. 91h:00030

Lecture Notes in Computer Science ★ Algebraic logic and universal algebra in computer science. 91g:03005

Lisbon ★ Lattices, semigroups, and universal algebra. 91h:00030

## 08Axx Algebraic structures [see also 03C05]

### 08A02 Relational systems, laws of composition

Behrendt, Gerhard Automorphisms and semi-automorphisms of relational systems. 91j:08001

Šlapal, Josef On the direct power of relational systems. (Russian summary) 91c:08002

Items with secondary classifications in 08A02

Dedeić, R. (with Sarapa, N.) Fixed-point theorems for a sequence of mappings on Menger spaces. 91h:54077

Liu, Zao Shu (with Zheng, Quan<sup>2</sup>) The embedded theorem for family of quasi metric spaces in Menger space and its application. (Not in MR)

Muradov, F. Kh. Menger algebras of strongly open mappings. (Russian. English and Azerbaijani summaries) 91c:54019

Sarapa, N. *see* Dedeić, R., 91h:54077

Šlapal, Josef On relations. 91c:04001

Stojaković, Milla Nonexpansive and contraction mappings in Menger space. (Serbo-Croatian summary) 91h:54009

Vasuki, R. Common fixed point, constancy theorems for mappings on Menger spaces. 91h:54092

Yin, Ri Xiu Menger probabilistic metric spaces related to profile functions. II. (Chinese. English summary) (Not in MR)

Zheng, Quan<sup>2</sup> *see* Liu, Zao Shu, (Not in MR)

### 08A05 Structure theory

Cho, Jung R. Representations of certain medial algebras. 91f:08001

Draškovićová, Hilda (with Hedlíková, Jarmila) Perfect distributive median algebras. 91k:08001

Gardner, B. J. How to make many-sorted algebras one-sorted. 91h:08001

Hedlíková, Jarmila *see* Draškovićová, Hilda, 91k:08001

Kisilewicz, Andrzej On algebras with bases of different cardinalities. 91f:08002

Lee, Shu-Min On the quotient  $(Q, m)$ -ringoids. 91j:08002

Moraisyan, Yu. M. The multiplicative group of a field and hyperidentities. 91h:08002

Plonka, Jerzy Some decompositions of the sum of a semilattice ordered system of algebras. 91h:08002

Šulka, Robert Nilpotency in universal algebras. 91i:08001

Wojtunik, Alina The sum of an  $(F_1, F_2)$ -system of disjoint algebras. 91i:08002

Items with secondary classifications in 08A05

Andréka, H. Representations of distributive lattice-ordered semigroups with binary relations. 91m:06025

Both, N. *see* Purdes, I., 91j:20169

Militz, Rainer (with Veldsman, Stefan) Radicals and subdirect decompositions of  $\Omega$ -groups. 91g:20113

Purdes, I. (with Both, N.) Isomorphisms of power  $n$ -semigroups. 91j:20169

Trnková, Věra Simultaneous representations by products in categories. 91d:18007

Veldsman, Stefan *see* Militz, Rainer, 91g:20113

### 08A30 Subalgebras, congruence relations

Chajda, Ivan On the existence of nontrivial tolerances in permutable algebras. 91j:08003

Duda, Jaromír Mal'cev-type theorems for partial congruences. (Russian and Czech summaries) 91h:08003

Kajawa, Bernardeta (with Thanh, Kieu Duc) Determining congruences by some system of their classes. 91m:08001

Niederle, Josef Transitivity of principal tolerances is not a Mal'cev property. 91j:08004

Pálfi, P. P. Modular subalgebra lattices. 91c:08003

— (with Saxl, Jan) Congruence lattices of finite algebras and factorizations of groups. 91h:08003

Sauer, Norbert W. (with Stone, M. G.) On a problem of B. Jónsson concerning subalgebras and endomorphisms. 91f:08003

Saxl, Jan *see* Pálfi, P. P., 91h:08003

Šešelja, Branimir (with Vojvodić, Gradimir) On the complementedness of the lattice of weak congruences. 91c:08004

Stone, M. G. *see* Sauer, Norbert W., 91f:08003

Thanh, Kieu Duc *see* Kajawa, Bernardeta, 91m:08001

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Auinger, Karl Weakly reductive semigroups with atomistic congruence lattices. 91h:20080

— Orthonormal semigroups with complemented congruence lattices. 91h:20048

Blyth, T. S. (with Varlet, Jules) Principal congruences on some lattice-ordered algebras. 91c:06019

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— Forms of the congruence principle. 91a:08005

— A note on permutability in varieties. (Russian and Czech summaries) 91a:08007

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Duda, Jaromír Rees sublattices of a lattice. 91c:06013

— Coherence in varieties of algebras. 91d:08004

Fried, Ervin (with Grätzer, G.) Notes on tolerance relations of lattices: a conjecture of R. N. McKenzie. 91k:08009

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Kolibrar, Milan Congruence relations and direct decompositions of ordered sets. II. 91k:06010

Pondělíček, Bedřich Tolerance modular varieties of semigroups. 91j:20142

Ratna, M. F. ★ Итерационные цепные классы псевдобулевых функций. (Russian) [Iterative chain classes of pseudo-Boolean functions] 91g:03128

Rodenburg, P. H. A simple algebraic proof of the equational interpolation theorem. 91k:03081

Romov, B. A. A series of maximal subalgebras of direct products of algebras of finite-valued logics. 91a:03116

— On the problem of completeness in the algebra of partial functions of finite-valued logic. 91f:03127

Sauer, Norbert W. (with Stone, M. G.) A characterization of extendible lattices. 91i:06008

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— (with Tepavčević, Andreja) Infinitely distributive elements in the lattice of weak congruences. 91m:06009

Smirnov, D. M. Lattices of blocks of regular algebras and solvable groups. 91c:06016

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Wild, Marcel Join epimorphisms which preserve certain lattice identities. 91h:06009

### 08A35 Automorphisms, endomorphisms

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Marchenkov, S. S. Classification of algebras with an alternating group of automorphisms. (Russian) 91c:08005

Schweigert, Dietmar Clone homomorphisms and reductions. (German and Russian summaries) 91h:08004

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Bankston, Paul (with McCoy, Robert A.) On the classification of minimally free rings of continuous functions. 91h:54027

Behrendt, Gerhard Automorphisms and semi-automorphisms of relational systems. 91j:08001

Gruska, Damas P. Genomorphisms of semimodular lattices. 91g:06010

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Wuik, Barbara The representation of Sylow 2-subgroups of permutation groups by automorphisms of some universal algebras. (Polish. English summary) 91g:20027

— (with Wuik, Henryk) Representations of some class of groups by automorphisms of universal algebras with one fundamental operation of finite arity. (Polish. English summary) 91g:20028

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— Boolean clones and hyperidentities in universal algebras. 91m:08002

— Hyperidentities of dyadic algebras. 91d:08001

Draškovićová, Hilda On some classes of perfect media. 91h:08005

Galuska, J. On algebras with unique essentially  $n$ -ary operations. 91a:08001

Haddad, Lucien Intersections of finitely generated clones. 91a:08002

— (with Rosenberg, Ivo G.) Partial Sheffer operations. 91m:08003

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— On reduction theorems in the problem of composition of functions. 91h:08002

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Sangalli, Arturo A. L. The degree of invariability of a bicentrally closed clone. (see 91h:06030)

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Szendrei, Ágnes Simple surjective algebras having no proper subalgebras. 91h:08006

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- Davey, B. A. Monotone clones and congruence modularity. 91b:08008  
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 Plass, A. G. On the number of discriminant varieties that are incomparable in countable epimorphism skeletons. 91g:08001  
 Reschke, Marlies (with Denecke, Klaus) Ein neuer Beweis für die Ergebnisse von E. L. Post über abgeschlossene Klassen Boolescher Funktionen. (English and Russian summaries) [A new proof of E. L. Post's results on closed classes of Boolean functions] 91d:06016  
 Rosenberg, Ivo G. Partial algebras and clones via one-point extension. 91j:08006

## 08A50 Word problems [see also 03D40, 06B25, 20F10, 68R15]

- Khariampovich, O. G. *see* Sapir, M. V., 91c:08006  
 Pedersen, John Computer solution of word problems in universal algebra. 91c:08001  
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- Bartol, Wiktor Weak subalgebra lattices of monounary partial algebras. 91b:08004  
 Crenković, Siniša (with Madarász, R.) On a problem of partial algebras. (Serbo-Croatian summary) 91c:08007  
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- Bartol, Wiktor Termal algebras—an approach to inference on incomplete data. 91b:08005  
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 Bentley, H. L. (with Murthy, N.) Essentially algebraic categories of partial algebras. 91b:08005  
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- Lyapin, E. S. The possibility of semigroup continuation of a partial groupoid. 91a:20076  
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 Pasztor, Ana A sup-preserving completion of ordered partial algebras. 91b:68138  
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## 08A60 Unary algebras

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- Ságeti, Jenő On well-ordered mono-unary algebras. 91m:06001

## 08A65 Infinitary algebras

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- Möbus, A. Equational theory of continuous lattices. 91b:06017

## 08A70 Applications of universal algebra in computer science

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- Lemke, Thomas (with Seibt, Heinz) On identities of the generalized Turing algebra. I. (German and Russian summaries) 91f:03083  
 Ligonat, Gérard Intervalles généralisés. I. (English summary) [Generalized intervals. I] 91c:68112  
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- Choban, M. M. (with Kiriya, L. L.) Universal covering algebras. (Russian) 91b:08006  
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- Bhattacharya, D. K. On generalizations of algebra. (Not in MR)  
 Celakoski, N. (with Markovski, S.; Janeva, B.) Some classes of vector valued associatives. (Macedonian summary) (see 91b:20002)  
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## 08B10 Congruence modularity, congruence distributivity

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- Czelakowski, Janusz. Relatively congruence-distributive subquasivarieties of filter varieties. (Not in MR)
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- Czelakowski, Janusz (with Dziobiak, Wiesław). Congruence distributive quasivarieties whose finitely subdirectly irreducible members form a universal class. 91h:08013
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- Adaricheva, K. V. (with Gorbunov, V. A.). Equational closure operator and forbidden semidistributive lattices. 91g:06006
- Almeida, Jorge. On pseudovarieties, varieties of languages, filters of congruences, pseudoidentities and related topics. 91h:08011
- Gorbunov, V. A. *see* Adaricheva, K. V., 91j:08009
- Gurchenkov, S. A. The lattice of varieties of rigid lattice-ordered groups does not have the covering property. 91h:06031
- Ježek, Jaroslav (with Quackenbush, R.). Directoids: algebraic models of up-directed sets. 91h:06002
- McKenzie, Ralph N. (with Taylor, Walter). Interpretations of module varieties. 91k:03077
- Pastijn, Francis J. The lattice of completely regular semigroup varieties. 91d:20068
- Commuting fully invariant congruences on free completely regular semigroups. 91j:20138
- Petrich, Mario (with Reilly, Norman R.). The modularity of the lattice of varieties of completely regular semigroups and related representations. 91j:20139
- (with Reilly, Norman R.). Operators related to idempotent generated and monoid completely regular semigroups. 91j:20141
- Polák, Libor. Structural theorems for varieties of bands. 91k:20065
- Popev, Angel. Varieties of associative algebras with a unit whose lattice of subvarieties is distributive. I. (Russian. English summary) 91d:16054
- Quackenbush, R. *see* Ježek, Jaroslav, 91h:06002
- Reilly, Norman R. *see* Petrich, Mario, 91j:20139 and 91j:20141
- Taylor, Walter. *see* McKenzie, Ralph N., 91k:03077

## 08B20 Free algebras

- Bankston, Paul. A note on large minimally free algebras. 91h:08008

- Berman, Joel. The value of free algebras. 91j:08010
- On the combinatorics of free algebras. 91h:08012
- Borisenko, V. V. Representability with respect to free algebras. (Russian) (see 91k:00013)
- Halkowska, Katarzyna. On free algebras in varieties defined by externally compatible identities. (see 91h:08001)
- Mekler, Alan H. (with Shelah, Saharon).  $L_{\infty, \omega}$ -free algebras. 91j:08011
- Shelah, Saharon. *see* Mekler, Alan H., 91j:08011

## Items with secondary classifications in 08B20

- Andréka, H. (with Jónsson, Bjarni; Németi, István). Relatively free relation algebras. 91j:03078
- Belegradek, O. V. Some model theory of locally free algebras. (see 91f:03008)
- Forking in locally free algebras. 91c:03029
- Ježek, Jaroslav (with McNulty, George F.). Bounded and well-placed theories in the lattice of equational theories. 91m:08005
- (with Slavík, V.). Free lattices over join-trivial partial lattices. 91a:06007
- Jónsson, Bjarni. *see* Andréka, H.; et al., 91j:03078
- Kiriyak, L. L. The space of quasicomponents of free topological universal algebras. (Russian) 91h:22007
- Kisilewicz, Andrzej. Varieties of algebras with no nontrivial finite members. 91j:08007
- McNulty, George F. *see* Ježek, Jaroslav, 91m:08005
- Németi, István. *see* Andréka, H.; et al., 91j:03078
- Forst, Hans-E. Separation in free algebras over Top and  $k$ -Top. 91d:18002
- Slavík, V. *see* Ježek, Jaroslav, 91a:06007
- Tschantz, Steven T. Infinite intervals in free lattices. 91h:06016

## 08B25 Products, amalgamated products, and other kinds of limits and colimits [see also 18A30]

- Fried, Ervin (with Grätzer, G.). Notes on tolerance relations of lattices: a conjecture of R. N. McKenzie. 91h:08009
- Galanová, Yana. The tensor product on a variety. (see 91h:08001)
- Grätzer, G. *see* Fried, Ervin, 91h:08009
- Hule, Harald (with Pilz, Günter). Direct products of varieties. (see 91g:00033)
- Jipsen, Peter (with Rose, Henry). Absolute retracts and amalgamation in certain congruence distributive varieties. 91h:08009
- Pilz, Günter. *see* Hule, Harald, 91g:00033
- Rose, Henry. *see* Jipsen, Peter, 91h:08009

## Items with secondary classifications in 08B25

- Almeida, Jorge. Semidirect products of pseudovarieties from the universal algebraist's point of view. 91a:20068
- Bruyns, Peter (with Rose, Henry). Varieties with cofinal sets: examples and amalgamation. 91k:08007
- Niederle, Josef. Frame tolerances are directly decomposable. 91m:06007
- Rose, Henry. *see* Bruyns, Peter, 91k:08007

## 08B26 Subdirect products and subdirect irreducibility

- Bigelow, David (with Burris, Stanley). Boolean algebras of factor congruences. 91j:08012
- Burris, Stanley. *see* Bigelow, David, 91j:08012
- McKenzie, Ralph N. Residually small varieties revisited. (see 91h:00030)

## 08B30 Injectives, projectives

- Items with secondary classifications in 08B30
- Choe, Tae Ho. A dual adjointness on partially ordered topological spaces. 91m:18004

## 08B99 None of the above, but in this section

- Blak, W. J. On interpretations of varieties with semilattice reduct. 91h:08010
- Goldblatt, Robert. Varieties of complex algebras. 91d:08005
- Graczyńska, Ewa (with Schweigert, Dietmar). Hypervarieties of a given type. 91h:08009
- Schweigert, Dietmar. *see* Graczyńska, Ewa, 91h:08009
- Items with secondary classifications in 08B99
- Burgin, M. S. Functor operations in varieties of linear  $\Omega$ -algebras. (Russian) 91m:15044
- Citrulis, Jānis. Correction: "Abstract description of data types and varieties of data algebras" [in *Algebra and discrete mathematics: the theoretical foundations of software* (Russian), 131–144, Latv. Gos. Univ., Riga, 1986; MR 88i:68072]. (Russian. English summary) 91h:68079
- Eigenharter, Günther (with Winkler, Reinhard). Commutative composition semigroups of polynomials. 91f:20054
- Geiger, David. Algebras of diagonal relations. 91h:06005
- Shemetkov, L. A. *see* Skiba, A. N., 91j:17011
- Skiba, A. N. (with Shemetkov, L. A.). Projectors and semiprojectors of algebras of Ma'nev varieties. (Russian) 91j:17011
- Tembrowski, Bronisław.  $B$ -varieties with normal free algebras. 91h:03125
- Winkler, Reinhard. *see* Eigenharter, Günther, 91f:20054

## 08Cxx Other classes of algebras

## 08C05 Categories of algebras [see also 18C05]

- Dăscăluș, Dan (with Popuș, V.).  $a$ -categoric des paires Jordan linéaires. (Romanian summary) [a-category of linear Jordan pairs] 91c:08014
- Ebrahimi, M. Mehdi. Bimorphisms and tensor products in a topos. 91g:08002



- Petrich, Mario (with Sichler, J.; Trnková, Věra) Simultaneous representations in categories of algebras. 91f:08005  
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 Sichler, J. see Petrich, Mario; et al., 91f:08005  
 Trnková, Věra see Petrich, Mario; et al., 91f:08005

#### Items with secondary classifications in 08C05

- Adámek, Jiří (with Herrlich, Horst; Strecker, George E.) ★ Abstract and concrete categories. 91h:18001  
 Bentley, H. L. (with Murthy, N.) Essentially algebraic categories of partial algebras. 91h:08005  
 Hébert, Michel Sur le rang et la définissabilité des opérations implicites dans les classes d'algèbres. [On the rank and definability of implicit operations in classes of algebras] 91i:03065  
 Herrlich, Horst see Adámek, Jiří; et al., 91h:18001  
 Jarzembki, Grzegorz Concrete categories representable by universally axiomatizable classes of finitary algebraic systems. 91c:18005  
 Johnstone, Peter T. Collapsed toposes and Cartesian closed varieties. 91c:18007  
 Murthy, N. see Bentley, H. L., 91h:08005  
 Poigné, Axel Parametrization for order-sorted algebraic specification. 91g:68090  
 Strecker, George E. see Adámek, Jiří; et al., 91h:18001  
 Vogel, Hans-Jürgen Enriched categories and general algebra. 91j:18013

#### 08C10 Axiomatic model classes [see also 03Cxx, in particular 03C60]

- Almeida, Jorge Equations for pseudovarieties. 91c:08015

#### 08C15 Quasivarieties

- Czelakowski, Janusz Relatively point regular quasivarieties. 91h:08010  
 — (with Dziobiak, Wiesław) Congruence distributive quasivarieties whose finitely subdirectly irreducible members form a universal class. 91i:08013  
 Dziobiak, Wiesław see Czelakowski, Janusz, 91i:08013  
 Kearnes, Keith A. Relatively congruence distributive subquasivarieties of a congruence modular variety. 91i:08014  
 Palasiński, Marek The answer to Dziobiak's question. 91i:08015  
 Items with secondary classifications in 08C15  
 Adaricheva, K. V. (with Gorbunov, V. A.) The structure of finite point lattices of quasivarieties. 91j:08009  
 Bergman, Clifford (with McKenzie, Ralph N.) Minimal varieties and quasivarieties. 91c:08013  
 Gorbunov, V. A. see Adaricheva, K. V., 91j:08009  
 McKenzie, Ralph N. see Bergman, Clifford, 91c:08013  
 Vogel, Hans-Jürgen Enriched categories and general algebra. 91j:18013

#### 08C99 None of the above, but in this section

- Almeida, Jorge On pseudovarieties, varieties of languages, filters of congruences, pseudoidentities and related topics. 91h:08011  
 de Azevedo, Assis The join of the pseudovariety  $J$  with permutative pseudovarieties. 91i:08016  
 Bergman, George M. HSP ≠ SHPS for metabelian groups, and related results. 91m:08007  
 Graczyńska, Ewa On some operators on pseudovarieties. (Not in MR)  
 Shemetkov, L. A. (with Skiba, A. N.) ★ Формации алгебраических систем. (Russian) [Formations of algebraic systems] 91g:08003  
 Skiba, A. N. see Shemetkov, L. A., 91g:08003

#### Items with secondary classifications in 08C99

- Freese, Ralph On the two kinds of probability in algebra. 91h:03059  
 Tallini Scafati, Maria  $A$ -hypermodes and hypervector spaces. (Italian. English summary) 91i:16082

## 11-XX Number theory

### 11-00 General reference works (handbooks, dictionaries, bibliographies, etc.)

- Borwein, Jonathan M. (with Borwein, Peter) ★ A dictionary of real numbers. 91g:11001  
 Borwein, Peter see Borwein, Jonathan M., 91g:11001

### 11-01 Instructional exposition (textbooks, tutorial papers, etc.)

- Guy, Richard K. The second strong law of small numbers. 91a:11001  
 Kern, Hans (with Rung, Josef) Ein Weg zu den rationalen Punkten auf der Kugel oder: Wozu die komplexen Zahlen auch gut sind. [An approach to the rational points on the sphere, or: Another thing complex numbers are good for] 91a:11002  
 LeVeque, William J. ★ Elementary theory of numbers. 91e:11001  
 Montgomery, Hugh L. see Niven, Ivan; et al., 91i:11001  
 Niven, Ivan (with Zuckerman, Herbert S.; Montgomery, Hugh L.) ★ An introduction to the theory of numbers. 91i:11001  
 (Pansche, L.) see Kern, Hans, 91a:11002  
 Rung, Josef see Kern, Hans, 91a:11002

- Zuckerman, Herbert S. see Niven, Ivan; et al., 91i:11001

#### Items with secondary classifications in 11-01

- Artin, Emil (with Tate, John) ★ Class field theory. 91b:11129  
 Artmann, Benno (with Gerecke, Walter) Didaktische Beobachtungen zu einem Divergenzbeweis für  $\sum 1/p$  von Paul Erdős. [Didactic observations on a proof of divergence for  $\sum 1/p$  by Paul Erdős] (Not in MR)  
 Cacon, Albert A. Visualizing the  $p$ -adic integers. 91m:11107  
 Faisant, Alain Résolution de l'équation du second degré en nombres entiers. [Integer solution of the quadratic equation] 91k:11024  
 Gerecke, Walter see Artmann, Benno, (Not in MR)  
 Graham, Ronald L. ★ Arithmetic progressions: from Hilbert to Shelah. 91g:11011  
 Narkiewicz, Władysław ★ Elementary and analytic theory of algebraic numbers. 91h:11107  
 Ono, Takashi ★ An introduction to algebraic number theory. 91i:11138  
 Schroeder, M. R. Number theory and Fourier analysis applications in physics, acoustics and computer science. (see 91g:42001)  
 Tate, John see Artin, Emil, 91b:11129

### 11-02 Research exposition (monographs, survey articles)

- Erdős, Paul On some problems and results in elementary number theory. (Chinese summary) 91f:11001  
 (Gamkrelidze, R. V.) see Current problems in mathematics. Fundamental directions, 91j:11001a  
 Lang, Serge ★ Cyclotomic fields I and II. 91c:11001  
 Manin, Yu. I. (with Panchishkin, A. A.) Introduction to number theory. (Russian) 91j:11001b  
 Panchishkin, A. A. see Manin, Yu. I., 91j:11001b  
 (Rubin, Karl) see Lang, Serge, 91c:11001

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- Current problems in mathematics. Fundamental directions ★ Современные проблемы математики. Фундаментальные направления. Том 49. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 49] 91j:11001a  
 Itogi Nauki i Tekhniki ★ Современные проблемы математики. Фундаментальные направления. Том 49. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 49] 91j:11001a

#### Items with secondary classifications in 11-02

- (Barvink, A. I.) see Stanley, Richard P., 91m:05002  
 Erdős, Paul Problems and results on extremal problems in number theory, geometry, and combinatorics. 91d:05088  
 Li, Lei A survey of research on prime factorizations and fast primality testing algorithms. (Chinese) 91b:11145  
 (Lodkin, A. A.) see Stanley, Richard P., 91m:05002  
 Mignotte, Maurice Propriétés arithmétiques des suites récurrentes linéaires. [Arithmetic properties of linear recurrent sequences] 91j:11012  
 Mollin, Richard A. (with Williams, Hugh Cowie) Class number problems for real quadratic fields. 91f:11074  
 (Rota, Gian-Carlo) see Stanley, Richard P., 91m:05002  
 Stanley, Richard P. ★ Перечислительная комбинаторика. (Russian) [Enumerative combinatorics] 91m:05002  
 Tazov, V. P. A survey of investigations in the quantitative form of the Goldbach-Euler problem. (Russian) 91f:11032  
 (Vershik, A. M.) see Stanley, Richard P., 91m:05002  
 Williams, Hugh Cowie see Mollin, Richard A., 91f:11074

### 11-03 Historical (must also be assigned at least one classification number from Section 01)

- Arya, Shashi Prabha Fermat numbers. (Not in MR)  
 Erdős, Paul Ramanujan and I. 91a:11003  
 (Ramanujan, Srinivasa) see Erdős, Paul, 91a:11003  
 Selberg, Atle The history of Rademacher's formula for the partition function  $p(n)$ . (Norwegian. English summary) 91b:11001  
 Singal, M. K. Some famous conjectures. I. (Not in MR)

#### Items with secondary classifications in 11-03

- Agarwal, Ratan P. Ramanujan's life and works—an overview. (see 91g:33001)  
 Antropov, A. A. On the history of the concept of genus of binary quadratic form. (Russian. English summary) 91i:01031  
 Bashmakova, I. G. Leonhard Euler's contributions to algebra. (Russian) (see 91e:01026)  
 Berndt, Bruce C. Ramanujan and the theory of prime numbers. 91g:01025  
 Brentjes, Sonja (with Hogendijk, Jan P.) Notes on Thābit ibn Qurra and his rule for amicable numbers. (French and German summaries) 91m:01004  
 (Dirichlet, P. G. Lejeune) see Shields, Allen Lowell, 91b:01054  
 Ebbinghaus, H.-D. (with Hermes, Hans; Hirzebruch, Friedrich; Koecher, Max; Mainzer, K.; Neukirch, J.; Prestel, Alexander; Remmert, Reinhold) ★ Numbers. 91h:00005  
 (Erdős, Paul) see Turán, Pál, 91i:01145  
 (Euler, Leonhard) see Matvičukaya, G. P., (91e:01026); Bashmakova, I. G., (91e:01026) and Lavrinenko, T. A., (91e:01026)  
 (Ewing, John H.) see Ebbinghaus, H.-D.; et al., 91h:00005  
 Frei, Günther Heinrich Weber and the emergence of class field theory. 91e:01012  
 (Gruber, Peter M.) see Hlawka, Edmund, 91b:01094  
 (Hecke, Erich) see Schoeneberg, B., 91b:01083 and Patterson, S. J., 91m:01020  
 Hermes, Hans see Ebbinghaus, H.-D.; et al., 91h:00005  
 Hirzebruch, Friedrich see Ebbinghaus, H.-D.; et al., 91h:00005  
 Hlawka, Edmund ★ Selecta. 91b:01094  
 Hogendijk, Jan P. see Brentjes, Sonja, 91m:01004  
 Holzapfel, R.-P. A voyage with three balloons. 91e:01004

- Kahane, Jean-Pierre Quelques aspects de la vie et de l'œuvre de Georges Poitou. [Some aspects of the life and work of Georges Poitou] 91j:01048
- Kappe, Luise-Charlotte (with Schlickewei, Hans Peter; Schwarz, Wolfgang Karl) Theodor Schneider zum Gedächtnis. [In memoriam Theodor Schneider] 91h:01060
- Kasanes, Eero see Maala, Erkki, 91b:01033
- Koecher, Max see Ebbinghaus, H.-D.; et al., 91h:00005
- Lachaud, Gilles Exactitude et approximation en analyse diophantienne. [Exactness and approximation in Diophantine analysis] 91f:01002
- (Lamotke, K.) see Ebbinghaus, H.-D.; et al., 91h:00005
- Lavrinenko, T. A. Diophantine equations in the works of L. Euler. (Russian) (see 91e:01026)
- Lehmer, D. H. Factorization then and now. 91j:11111
- Lippov, S. P. The method of successive Fermat iterations. (Russian) 91i:01024
- Mainzer, K. see Ebbinghaus, H.-D.; et al., 91h:00005
- Matvievskaia, G. P. (with Ozhigova, E. P.) Euler's manuscripts in number theory. (Russian) (see 91e:01026)
- Maala, Erkki (with Kasanes, Eero) Chez Fermat A.D. 1637. 91b:01033
- Neukirch, J. see Ebbinghaus, H.-D.; et al., 91h:00005
- (Orde, H. L. S.) see Ebbinghaus, H.-D.; et al., 91h:00005
- Ozhigova, E. P. see Matvievskaia, G. P., (91e:01026)
- Patterson, S. J. Erich Hecke und die Rolle der  $L$ -Reihen in der Zahlentheorie. [Erich Hecke and the role of  $L$ -series in number theory] 91m:01020
- (Poitou, Georges) see Kahane, Jean-Pierre, 91j:01048
- Prestel, Alexander see Ebbinghaus, H.-D.; et al., 91h:00005
- (Ramanujan, Srinivasa) see Agarwal, Ratan P., (91g:33001)
- Rashed, Rashid Ibn al-Haytham et les nombres parfaits. (German and Arabic summaries) [Ibn al-Haytham and perfect numbers] 91d:01002
- Remmert, Reinhold see Ebbinghaus, H.-D.; et al., 91h:00005
- Sandbakken, Jan Euler's remarkable polynomial and the solution of three classical class number problems of Gauss. (Norwegian. English summary) 91j:01006
- Schlickewei, Hans Peter see Kappe, Luise-Charlotte; et al., 91h:01060
- (Schmidt, Wolfgang M.) see Hlawka, Edmund, 91h:01094
- (Schneider, Theodor) see Kappe, Luise-Charlotte; et al., 91h:01060
- Schoenberg, B. Erich Hecke 1887-1947. (German) 91b:01083
- Schwarz, Wolfgang Karl see Kappe, Luise-Charlotte; et al., 91h:01060
- Shields, Allen Lowell Lejeune Dirichlet et la théorie de l'analyse diophantienne: 1837-1839. 91h:01054
- (Siegel, Carl Ludwig) see Hlawka, Edmund, 91h:01094
- Singal, Asha Rani Pythagorean triples. (Not in MR)
- Tamasy, Olga Some noncommutativity methods in algebraic number theory. 91c:01045
- (Thabit ibn Qurra al-Harrani) see Brentjes, Sonja, 91m:01004
- Turán, Pál Collected papers of Paul Turán. Vol. 1-3. 91i:01145
- Waldschmidt, Michel Algebraic values of analytic functions. (Turkish summary) 91h:11056
- Wang, Lian Xiang see Wang, Yuan, 91c:11037
- Wang, Yuan (with Wang, Lian Xiang) Diophantine approximations in China. 91c:11037
- (Weber, Heinrich) see Fret, Günther, 91e:01012
- Weil, André On Eisenstein's copy of the *Disquisitiones*. 91m:01016

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- Bibliography:**  
Turán, Pál see Turán, Pál, 91i:01145
- Biography:**  
Dirichlet, P. G. Lejeune see Shields, Allen Lowell, 91h:01054
- Ramanujan, Srinivasa see Agarwal, Ratan P., (91g:33001)
- Turán, Pál see Turán, Pál, 91i:01145
- Collected Works:**  
Turán, Pál see Turán, Pál, 91i:01145
- Obituary:**  
Poitou, Georges see Kahane, Jean-Pierre, 91j:01048

### 11-04 Explicit machine computation and programs (not the theory of computation or programming)

#### Items with secondary classifications in 11-04

- Bruner, Armand (with McGuinness, Oisín) The behavior of the Mordell-Weil group of elliptic curves. 91b:11076
- McGuinness, Oisín see Bruner, Armand, 91b:11076

### 11-06 Proceedings, conferences, collections, etc.

- (Baldassarri, F.) see  $p$ -adic analysis, 91k:11005
- (Bartman, Paul T.) see Analytic number theory, 91k:11001
- (Berndt, Bruce C.) see Analytic number theory, 91k:11001
- (Busch, Siegfried) see  $p$ -adic analysis, 91k:11005
- (Bykovskii, V. A.) see Automorphic functions and their applications, 91k:11002
- (Chudakov, N. G.) see Investigations in number theory, 91a:11004
- (Costes, John) see Algebraic number theory, 91k:11001 and  $L$ -functions and arithmetic, 91k:11003
- (Diamond, Harold George) see Analytic number theory, 91k:11001
- (Dwork, Bernard) see  $p$ -adic analysis, 91k:11005
- (Foury, Etienne) see Analytic number theory, 91k:11002
- (van der Geer, Gerard) see Arithmetic algebraic geometry, 91h:11002
- (Goldstein, Catherine) see Seminar: Number Theory, 91k:11004
- (Greenberg, Ralph) see Algebraic number theory, 91k:11001
- (Györy, K.) see Number theory, 91a:11006
- (Halász, G.) see Number theory, 91a:11006
- (Halberstam, Heinz) see Analytic number theory, 91h:11001
- (Hildebrand, Adolf) see Analytic number theory, 91h:11001
- (Iwasawa, Kenkichi) see Algebraic number theory, 91k:11001
- (Kuznetsov, N. V.) see Automorphic functions and their applications, 91k:11002

- (Mazur, Barry C.) see Algebraic number theory, 91k:11001
- (Nagasaka, Kenji) see Analytic number theory, 91e:11002
- (Oort, F.) see Arithmetic algebraic geometry, 91h:11002
- (Satake, Ichirō) see Algebraic number theory, 91k:11001
- (Steenbrink, J. H. M.) see Arithmetic algebraic geometry, 91h:11002
- (Taylor, Martin J.) see  $L$ -functions and arithmetic, 91k:11003

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- Algebraic number theory** ★ Algebraic number theory. 91k:11001
- Allerton Park, IL** ★ Analytic number theory. 91h:11001
- Analytic number theory** ★ Analytic number theory. 91e:11002
- ★ Analytic number theory. 91h:11001
- Arithmetic algebraic geometry** ★ Arithmetic algebraic geometry. 91h:11002
- Automorphic functions and their applications** ★ Automorphic functions and their applications. 91k:11002
- Birthday:**  
Iwasawa, Kenkichi ★ Algebraic number theory. 91k:11001
- Budapest** ★ Number theory. Vol. I. 91a:11006
- Colloquia Mathematica Societatis János Bolyai** ★ Number theory. Vol. I. 91a:11006
- Conference:**  
**Analytic Number Theory** ★ Analytic number theory. 91h:11001
- Arithmetic Algebraic Geometry** ★ Arithmetic algebraic geometry. 91h:11002
- Automorphic Functions and their Applications** ★ Automorphic functions and their applications. 91k:11002
- Number Theory** ★ Number theory. Vol. I. 91a:11006
- $p$ -adic Analysis** ★  $p$ -adic analysis. 91k:11005
- Durham** ★  $L$ -functions and arithmetic. 91k:11003
- Investigations in number theory** ★ Исследования по теории чисел. (Russian) [Investigations in number theory] 91a:11004
- Khabarovsk** ★ Automorphic functions and their applications. 91k:11002
- $L$ -functions and arithmetic** ★  $L$ -functions and arithmetic. 91k:11003
- Lecture Notes in Mathematics** ★ Analytic number theory. 91e:11002
- ★  $p$ -adic analysis. 91k:11005
- Number theory** ★ Théorie des nombres. Année 1988/89. Fasc. I. (French) [Number theory. 1988/89. Part I] 91a:11005
- ★ Number theory. Vol. I. 91a:11006
- $p$ -adic analysis** ★  $p$ -adic analysis. 91k:11005
- Paris** ★ Séminaire de Théorie des Nombres, Paris 1988-1989. [Seminar on Number Theory, Paris 1988-1989] 91k:11004
- Progress in Mathematics** ★ Analytic number theory. 91h:11001
- ★ Séminaire de Théorie des Nombres, Paris 1988-1989. [Seminar on Number Theory, Paris 1988-1989] 91k:11004
- ★ Arithmetic algebraic geometry. 91h:11002
- Seminar:**  
**Number Theory** ★ Séminaire de Théorie des Nombres, Paris 1988-1989. [Seminar on Number Theory, Paris 1988-1989] 91k:11004
- Symposium:**  
**Analytic Number Theory** ★ Analytic number theory. 91e:11002
- $L$ -Functions and Arithmetic** ★  $L$ -functions and arithmetic. 91k:11003
- Theory of Algebraic Integers** ★ Daisituki seisuron. (Japanese) [Theory of algebraic integers] 91f:11002
- Texel** ★ Arithmetic algebraic geometry. 91h:11002
- Théorie des nombres** ★ Théorie des nombres. Année 1988/89. Fasc. I. (French) [Number theory. 1988/89. Part I] 91a:11005
- Theory of algebraic integers** ★ Daisituki seisuron. (Japanese) [Theory of algebraic integers] 91f:11002
- Tokyo** ★ Analytic number theory. 91e:11002
- Trento** ★  $p$ -adic analysis. 91k:11005

#### Items with secondary classifications in 11-06

- (Cartier, Pierre) see Festschrift: Grothendieck, Alexander, 91h:00035
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## 11Bxx Sequences and sets

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- Bhramaramba, M. V. S. see Siva Rama Prasad, V., 91d:11009  
 Brown, Thomas Craig (with Freedman, Allen R.) The uniform density of sets of integers and Fermat's last theorem. 91c:11010  
 Calkin, Neil J. On the number of sum-free sets. 91b:11015  
 Cooper, Curtis N. see Kennedy, Robert E., 91d:11007  
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 Grekos, G. Moyennes limites et convexité. (English summary) [Mean limit values and convexity] 91k:11014  
 Kennedy, Robert E. (with Cooper, Curtis N.) Tau numbers, natural density, and Hardy and Wright's Theorem 437. 91d:11007  
 Kunth, Peter Über die asymptotische Dichte gewisser Teilmengen der natürlichen Zahlen. [On the asymptotic density of certain subsets of natural numbers] 91g:11006  
 Moree, Pieter On a conjecture of Funar. 91e:11013  
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 Siva Rama Prasad, V. (with Bhramaramba, M. V. S.) On the Schnirelmann density of  $(k, r)$ -integers. 91d:11009

### Items with secondary classifications in 11B05

- Balog, A. On sum-interactive sets. 91k:11087  
 Graham, Ronald L.  $\otimes$ Arithmetic progressions: from Hilbert to Shelah. 91g:11011  
 Plaksia, V. A. Distribution of  $\mathcal{A}$ -free numbers. 91d:11114

### 11B13 Additive bases [see also 05B10]

- Biró, Miklós The interval subset sum problem. 91e:11014  
 Caro, Yair Generalized sum-free subsets. 91m:11004  
 Dixmier, Jacques Proof of a conjecture by Erdős and Graham concerning the problem of Frobenius. 91g:11007  
 Erdős, Paul (with Nathanson, Melvyn B.) Additive bases with many representations. 91e:11015  
 — (with Freiman, Gregory) On two additive problems. 91c:11011  
 Freiman, Gregory (with Heppes, A.; Uhrin, B.) A lower estimation for the cardinality of finite difference sets in  $\mathbb{R}^n$ . 91g:11008  
 — see also Erdős, Paul, 91c:11011  
 Heppes, A. see Freiman, Gregory; et al., 91g:11008  
 Jia, Xing De On a combinatorial problem. (Chinese. English summary) 91k:11015  
 Nathanson, Melvyn B. Sumsets containing  $k$ -free integers. 91g:11009  
 — Extremal properties for bases in additive number theory. 91h:11009

- Simultaneous systems of representatives and combinatorial number theory. 91d:11010  
 — see also Erdős, Paul, 91e:11015  
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- Backelin, Jörgen On the number of semigroups of natural numbers. 91k:11084  
 Calkin, Neil J. On the number of sum-free sets. 91b:11015  
 Chalmovich, Mark (with Freiman, Gregory; Galil, Zvi) Solving dense subset-sum problems by using analytical number theory. 91e:11153  
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 Lipkin, E. On representation of  $r$ th powers by subset sums. 91c:11055  
 Ma, Siu Lun Polynomial addition sets and symmetric difference sets. 91e:05018  
 Pomerance, Carl (with Sárközy, A.) On products of sequences of integers. 91g:11114  
 Ruzsa, Imre Z. Arithmetical topology. 91d:11008  
 Sárközy, A. see Pomerance, Carl, 91g:11114 and Erdős, Paul, 91i:11012

### 11B25 Arithmetic progressions [see also 11N13]

- Boebee, John Errata: "Examples of infinite, incongruent exact covers" [Amer. Math. Monthly 95 (1988), no. 2, 121–123; MR 89g:11013]. 91a:11013  
 — Some trigonometric identities related to exact covers. 91b:11013  
 Bergelson, Vitaly (with Furstenberg, Hillel; Hindman, Neil; Katznelson, Yitzhak) An algebraic proof of van der Waerden's theorem. 91g:11010  
 Furstenberg, Hillel see Bergelson, Vitaly; et al., 91g:11010  
 Graham, Ronald L.  $\otimes$ Arithmetic progressions: from Hilbert to Shelah. 91g:11011  
 Hindman, Neil see Bergelson, Vitaly; et al., 91g:11010  
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 Korec, Ivan On number of cosets in nonnatural disjoint covering systems. 91k:11016

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- Bergelson, Vitaly (with Hindman, Neil) Ultrafilters and multidimensional Ramsey theorems. 91f:03101  
 Brown, Thomas Craig (with Erdős, Paul; Freedman, Allen R.) Quasi-progressions and descending waves. 91a:11016  
 Erdős, Paul see Brown, Thomas Craig; et al., 91a:11016  
 Freedman, Allen R. see Brown, Thomas Craig; et al., 91a:11016  
 Hindman, Neil The semigroup  $\beta\mathbb{N}$  and its applications to number theory. 91m:20092  
 — see also Bergelson, Vitaly, 91f:03101  
 Oskolkov, V. A. Hardy-Littlewood problems on the uniform distribution of arithmetic progressions. 91d:11088  
 Shorey, T. N. (with Tijdeman, R.) Perfect powers in products of terms in an arithmetical progression. 91j:11016  
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### 11B34 Representation functions

- Gould, H. W. Series transformations for finding recurrences for sequences. 91b:11016

### 11B37 Recurrences (For applications to special functions, see 33-XX.)

- Akiyama, Shigeki Lehmer numbers and an asymptotic formula for  $\pi$ . 91m:11005  
 Arkin, Joseph (with Arney, David C.; Bergum, Gerald E.; Burr, Stefan A.; Porter, Bruce J.) Tiling the  $k$ th power of a power series. 91h:11010  
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 Bergum, Gerald E. see Arkin, Joseph; et al., 91h:11010  
 Bézivin, Jean-Paul (with Pethő, Attila; van der Poorten, Alfred J.) A full characterisation of divisibility sequences. 91k:11017  
 Burr, Stefan A. see Arkin, Joseph; et al., 91h:11010  
 Chan, Agnes Hui (with Games, Richard A.) On the quadratic spans of de Bruijn sequences. 91e:11014  
 Clark, D. M. (with Harkavy, A. A.; Silberger, Donald M.) The Riemann zeta and a normalization of complex-number sequences. 91d:11012  
 Dai, Zong Duo (with Feng, Xu Ning; Liu, Mu Lan; Wan, Zhe Xian) Nonlinear feedforward sequences of  $m$ -sequences. II. 91j:11010  
 Erdős, Paul (with Maxsein, Thomas; Smith, P. R.) Primzahlpotenzen in rekurrenten Folgen. (English summary) [Prime powers in recurrent sequences] 91i:11015  
 Feng, Xu Ning see Dai, Zong Duo; et al., 91j:11010  
 Games, Richard A. see Chan, Agnes Hui, 91e:11014  
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 Ihstedt, Henry Some sequences of large integers. 91h:11011  
 Koornan, R. J. (with Tijdeman, R.) Convergence properties of linear recurrence sequences. 91e:11016  
 Loahakosol, Wichian Some extensions of the Skolem-Mahler-Lech theorem. 91b:11017  
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 Marka, F. Schinzel's conjecture  $H$  and divisibility in abelian linear recurring sequences. 91i:11017  
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 — (with van der Poorten, Alfred J.) From geometry to Euler identities. 91d:11013

- Mignotte, Maurice Propriétés arithmétiques des suites récurrentes linéaires. [Arithmetic properties of linear recurrence sequences] 91g:11012
- Nagasaki, Kenji (with Shiue, Jau-Shyong) Asymptotic positiveness of linear recurrence sequences. 91h:11018
- Pethő, Attila Divisibility properties of linear recursive sequences. 91h:11019  
— see also Bézivin, Jean-Paul; et al., 91h:11017
- van der Poorten, Alfred J. see Mendès France, Michel, 91d:11013 and Bézivin, Jean-Paul; et al., 91h:11017
- Porter, Bruce J. see Arkin, Joseph; et al., 91h:11010
- Schmidt, Assmus L. Generalized Legendre polynomials. 91e:11017
- Shiue, Jau-Shyong see Nagasaki, Kenji, 91h:11018
- Shparlinski, I. E. Some arithmetic properties of recurrence sequences. 91m:11006
- Silberger, Donald M. see Clark, D. M.; et al., 91d:11012
- Smith, P. R. see Erdős, Paul; et al., 91h:11015
- Tijdeman, R. see Koonen, R. J., 91h:11016
- Vidár, Ivan Sequences of integers. (Slovenian. English summary) 91d:11015
- Vidomenko, V. P. Combinatorics of plane  $\delta$ -homogeneous tetra-angulations. 91d:11016
- Wan, Zhe Xian see Dai, Zong Dui; et al., 91h:11010
- Yu, Chang An A formula for solving recurrence relations with two parameters. (Chinese. English summary) 91h:11018

#### Items with secondary classifications in 11B37

- Boyd, David W. Addenda and errata: "On linear recurrence relations satisfied by Pisot sequences" [Acta Arith. 47 (1986), no. 1, 13–27; MR 88b:11065]. 91e:11118
- Deshommes, Bernadette On semi-local binomial units in cubic number fields. 91d:11136  
— Sur les zéros des fonctions symétriques complètes des corps cubiques. (English summary) [On the zeros of complete symmetric functions of cubic fields] 91h:11142
- Fitzpatrick, Patrick (with Norton, Graham) Linear recurrence relations and an extended subresultant algorithm. 91a:11068
- Gurak, S. Pseudoprimes for higher-order linear recurrence sequences. 91a:11067
- Jacobson, Elliot T. (with Vélez, William Y.) Uniform and  $f$ -uniform distribution of recurrence sequences over Dedekind domains. (Chinese summary) 91g:11015
- Kac, Mark A history-dependent random sequence defined by Ulam. 91c:11042
- Knuth, Donald E. A Fibonacci-like sequence of composite numbers. 91e:11020
- McCarthy, Paul J. (with Sivaramakrishnan, R.) Generalized Fibonacci sequences via arithmetical functions. 91g:11003
- Norton, Graham see Fitzpatrick, Patrick, 91a:11068
- Pethő, Attila (with Tichy, Robert F.) On digit expansions with respect to linear recurrences. 91c:11008  
— On the greatest prime factor and divisibility properties of linear recursive sequences. 91c:11085  
— (with Zimmer, Horst G.) Lineare rekurrente Folgen auf elliptischen Kurven. [Linear recurrent sequences on elliptic curves] 91h:11044
- van der Poorten, Alfred J. Notes on continued fractions and recurrence sequences. 91c:11079
- Singh, Surjeet Recurring sequences over vector spaces. 91d:16058
- Sivaramakrishnan, R. see McCarthy, Paul J., 91g:11003
- Spiess, Jürgen Some identities involving harmonic numbers. 91c:05021
- Tichy, Robert F. see Pethő, Attila, 91c:11008
- Vélez, William Y. see Jacobson, Elliot T., 91g:11015
- Will, Herbert S. (with Zeilberger, Doron) Towards computerized proofs of identities. 91a:33003
- Zeilberger, Doron see Will, Herbert S., 91a:33003
- Zimmer, Horst G. see Pethő, Attila, 91h:11044

### 11B39 Fibonacci and Lucas numbers and polynomials and generalizations

- André-Jeannin, R. Lambert series and the summation of reciprocals in certain Fibonacci-Lucas-type sequences. 91j:11011
- Arkin, Joseph (with Arney, David C.; Dewald, Lee S.; Kennedy, Charles) Applications of Fibonacci sequences and tiling. 91g:11013
- Arney, David C. see Arkin, Joseph; et al., 91g:11013
- Arnoux, Pierre Some remarks about Fibonacci multiplication. 91a:11014
- Bailey, D. F. Two  $p^3$  variations of Lucas' theorem. 91f:11008
- Bicknell-Johnson, Marjorie Divisibility properties of the Fibonacci numbers minus one, generalized to  $C_n - C_{n-1} + C_{n-2} + k$ . 91h:11018
- Castellanos, Darío A generalization of Binet's formula and some of its consequences. 91c:11018
- Davis, B. S. (with Davis, T. A.) Fibonacci numbers and the golden mean in nature. 91f:11009
- Davis, T. A. see Davis, B. S., 91f:11009
- Dewald, Lee S. see Arkin, Joseph; et al., 91g:11013
- Di Porto, Adina (with Filippini, Piero; Montolivo, Emilio) On the generalized Fibonacci pseudoprimes. 91m:11007
- Filippini, Piero see Di Porto, Adina; et al., 91m:11007
- Kennedy, Charles see Arkin, Joseph; et al., 91g:11013
- Kies, Péter On rank of apparition of primes in Lucas sequences. 91e:11019  
— On primitive prime power divisors of Lucas numbers. 91g:11014
- Knuth, Donald E. A Fibonacci-like sequence of composite numbers. 91e:11020
- McDaniel, Wayne L. The g.c.d. in Lucas sequences and Lehmer number sequences. 91m:11008
- Montolivo, Emilio see Di Porto, Adina; et al., 91m:11007
- Porta, Horacio A. (with Stolarsky, Kenneth B.) Half-silvered mirrors and Wythoff's game. 91h:11019
- Robb, T. D. see Turner, John Christopher, 91j:11012
- Robbins, Neville Fibonacci numbers of the form  $cx^2$ , where  $1 \leq c \leq 1000$ . 91m:11009
- Stolarsky, Kenneth B. see Porta, Horacio A., 91h:11019
- Turner, John Christopher (with Robb, T. D.) Generalizations of the dual Zeckendorf integer representation theorems—discovery by Fibonacci trees and word patterns.

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- Agarwal, Ashok Kumar<sup>1</sup> On a new kind of numbers. 91h:11014
- Ali, M. K. see Gumb, Godfrey, 91h:82010
- Avshal, Y. (with Berend, Daniel) Transmission through a one-dimensional Fibonacci sequence of  $\delta$ -function potentials. 91h:81181
- Beck, István Partial orders and the Fibonacci numbers. 91a:06005
- Berend, Daniel see Avshal, Y., 91h:81181
- Bertrand-Mathis, Anne Comment écrire les nombres entiers dans une base qui n'est pas entière. [How to write integers in a nonintegral basis] 91d:11089
- Bezuska, Stanley (with Kokoska, Stephen) A polynomial formula for Fibonacci numbers. 91h:65145
- Bradford, Phillip G. The Fibonacci sequence and the time complexity of generating the Conway polynomial and related topological invariants. 91e:57008
- Bui Minh Phong Lucas primitive roots. 91h:11006
- Campbell, Colin M. (with Robertson, Edmund F.; Thomas, Richard M.) Finite groups of deficiency zero involving the Lucas numbers. 91c:20044
- Capocelli, Renato M. (with Cerbone, G.; Cull, Paul; Holloway, J. L.) Fibonacci facts and formulas. 91d:11166
- Cerbone, G. see Capocelli, Renato M.; et al., 91d:11166
- Cull, Paul see Capocelli, Renato M.; et al., 91d:11166
- Cyvin, Sven J. see Gutman, Ivan, 91c:05145
- D'Amico, A. (with Faccio, M.; Ferri, G.) Ladder network characterization and Fibonacci numbers. 91k:94041
- Faccio, M. see D'Amico, A.; et al., 91k:94041
- Ferri, G. see D'Amico, A.; et al., 91k:94041
- Fishburn, Peter C. (with Roberts, Fred S.; Marcus-Roberts, Helen M.) Van Lier sequences. 91h:11016
- Gould, H. W. Series transformations for finding recurrences for sequences. 91b:11016
- Gumb, Godfrey (with Ali, M. K.) Electronic properties of the tight-binding Fibonacci Hamiltonian. 91h:82010
- Gutman, Ivan (with Cyvin, Sven J.) A result on 1-factors related to Fibonacci numbers. 91c:05145
- Hanzel, Pavel Überlegungen zur Effektivität eines Algorithmus am Beispiel der Fibonacci'schen Zahlen. [Considerations on the efficiency of an algorithm using the example of the Fibonacci numbers] 91a:11069
- Holloway, J. L. see Capocelli, Renato M.; et al., 91d:11166
- Kinch, Lael F. (with Lehel, J.) Sum-distinct sequences and Fibonacci numbers. 91g:11021
- Kokoska, Stephen see Bezuska, Stanley, 91h:65145
- Kouvalina, John (with Liu, Yi-Hsin) Bit strings without  $q$ -separation. 91m:05012
- Lehel, J. see Kinch, Lael F., 91g:11021
- Liu, Pin Yen Repeating decimals represented by Tribonacci sequences appearing from left to right or from right to left. 91c:11011
- Liu, Yi-Hsin see Kouvalina, John, 91m:05012
- Marcus-Roberts, Helen M. see Fishburn, Peter C.; et al., 91h:11016
- Roberts, Fred S. see Fishburn, Peter C.; et al., 91h:11016
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- Sanders, Lee Kinsley A proof from graph theory for a Fibonacci identity. 91c:05064
- Shannon, A. G. see Turner, John Christopher, 91c:05065
- Thomas, Richard M. see Campbell, Colin M.; et al., 91c:20044
- Turner, John Christopher (with Shannon, A. G.) On  $k$ th-order colored convolution trees and a generalized Zeckendorf integer representation theorem. 91c:05065

### 11B50 Sequences (mod $m$ )

- Ellaoui, Shalom (with Kervaire, Michel; Saffari, Bahman) A new restriction on the lengths of Golay complementary sequences. 91h:11020
- Jacobson, Elliot T. (with Vélez, William Y.) Uniform and  $f$ -uniform distribution of recurrence sequences over Dedekind domains. (Chinese summary) 91g:11015  
— The distribution of residues of two-term recurrence sequences. 91m:11010
- Kervaire, Michel see Ellaoui, Shalom; et al., 91h:11020
- Krishna, H. V. Two properties of the Pell sequence. 91g:11016
- Saffari, Bahman see Ellaoui, Shalom; et al., 91h:11020
- Vélez, William Y. see Jacobson, Elliot T., 91g:11015

#### Items with secondary classifications in 11B50

- Adiga, Chandrashekar see Bhargava, Srinivasamurthy; et al., 91c:11059
- Bhargava, Srinivasamurthy (with Adiga, Chandrashekar; Somashekara, D. D.) Parity results deducible from certain theta function identities found in Chapter 16 of Ramanujan's second note-book. 91c:11059
- Gurak, S. Pseudoprimes for higher-order linear recurrence sequences. 91a:11067
- Niederreiter, Harald (with Shiue, Jau-Shyong) Weak equidistribution of sequences in finite fields. 91h:11092
- Shiue, Jau-Shyong see Niederreiter, Harald, 91h:11092
- Somashekara, D. D. see Bhargava, Srinivasamurthy; et al., 91c:11059

### 11B57 Farey sequences; the sequences $\{1^k, 2^k, \dots\}$

- Bender, Edward A. (with Kochman, Fred; West, Douglas B.) Adding up to powers. 91d:11017
- Kochman, Fred see Bender, Edward A.; et al., 91d:11017
- West, Douglas B. see Bender, Edward A.; et al., 91d:11017

### 11B65 Binomial coefficients; factorials; $q$ -identities [see also 05A10, 05A30]

- Andrews, George E. (with Kitaoka, Yoshiyuki) A result on  $q$ -series and its application to quadratic forms. 91d:11018



- Bang, Thøger (with Fuglede, Bent) No two quotients of normalized binomial mid-coefficients are equal. 91f:11010
- Davis, Kenneth S. (with Webb, William A.) Lucas' theorem for prime powers. 91d:11019
- (with Webb, William A.) Pascal's triangle modulo 4. 91k:11019
- Ekhad, Shalosh B. (with Tre, Sol) A purely verification proof of the first Rogers-Ramanujan identity. 91m:11011
- Fuglede, Bent see Bang, Thøger, 91f:11010
- Kitaoka, Yoshiyuki see Andrews, George E., 91d:11018
- Shan, Zan (with Wang, Edward T. H.) The gaps between consecutive binomial coefficients. 91b:11020
- Srivastava, Bhaskar Partial theta function expansions. 91e:11021
- Stein, Alan H. Binomial coefficients not divisible by a prime. 91c:11012
- Tre, Sol see Ekhad, Shalosh B., 91m:11011
- Wang, Edward T. H. see Shan, Zan, 91b:11020
- Webb, William A. see Davis, Kenneth S., 91d:11019 and 91k:11019
- Zhang, Liang Cheng Some  $q$ -integrals associated with modular forms. 91g:11017

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- Andrews, George E. An identity of Sylvester and the Rogers-Ramanujan identities. 91e:11111
- Euler's "exemplum memorabile inductionis fallacis" and  $q$ -trinomial coefficients. 91b:05011
- Bollinger, Richard C. (with Burchard, Charles L.) Lucas's theorem and some related results for extended Pascal triangles. 91d:05003
- Burchard, Charles L. see Bollinger, Richard C., 91d:05003
- Degoll, Lando Sur les séries hyperexponentielles et hyperbinomiales. (Serbo-Croatian summary) [Hyperexponential and hyperbinomial series] 91e:33014
- Denis, Remy Y. On certain continued fractions of Ramanujan. 91k:33007
- Gupta, Mukul Certain basic hypergeometric series transformations, mock-theta functions and related identities. II. 91m:33030
- Kholodov, A. N. The umbral calculus on logarithmic algebras. 91k:05014
- Srivastava, Hari M. Sum of a certain triple  $q$ -hypergeometric series. 91g:33023
- Tsumura, Hirofumi On the values of a  $q$ -analogue of the  $p$ -adic  $L$ -functions. 91b:11137
- Zeilberger, Doron A fast algorithm for proving terminating hypergeometric identities. 91d:33006

#### 11B68 Bernoulli and Euler numbers and polynomials

- Agoh, Takashi On Bernoulli numbers. II. (Chinese summary) 91g:11018
- On the Kummer-Mirimanoff congruences. 91d:11020
- Dilcher, K. Multiplikationstheorem für die Bernoullischen Polynome und explizite Darstellungen der Bernoullischen Zahlen. [Multiplication theorems for Bernoulli polynomials and explicit representations of Bernoulli numbers] 91h:11012
- Fujisaki, Genjiro A generalization of Carlitz's determinant. 91m:11012
- Girstmaier, Kurt A theorem on the numerators of the Bernoulli numbers. 91a:11015
- Kiryama, Hiroshi see Origuchi, Tadashi; et al., 91d:11021 and 91d:11022
- Kundert, Esayas George A von Staudt-Clausen theorem for certain Bernoullianlike numbers and regular primes of the first and second kind. 91k:11022
- Liu, Bo Lian The sum of  $k$ th powers of the first  $n$  integers. 91k:11020
- Matsuoka, Yoshio A table of the explicit formulas for the sums of powers  $S_p(n) = \sum_{k=1}^n k^p$  for  $p = 62(1)99$ . 91k:11021
- see also Origuchi, Tadashi; et al., 91d:11021 and 91d:11022
- Origuchi, Tadashi (with Kiriyama, Hiroshi; Matsuoka, Yoshio) Corrigenda: "A table of the explicit formulas for the sums of powers  $S_p(n) = \sum_{k=1}^n k^p$  for  $p = 1(1)61$ " [Rep. Fac. Sci. Kagoshima Univ. Math. Phys. Chem. No. 20 (1987), 11–31; MR 89c:11016]. 91d:11021
- (with Kiriyama, Hiroshi; Matsuoka, Yoshio) Corrigenda: "A table of the explicit formulas for the sums of powers  $S_p(n) = \sum_{k=1}^n k^p$  for  $p = 1(1)61$ . II" [Rep. Fac. Sci. Kagoshima Univ. Math. Phys. Chem. No. 21 (1988), 49–64; MR 90g:11026]. 91d:11022
- Phatak, Makarand S. Sums of powers of natural numbers. 91k:11021
- Singh, Surya Narain On unification and extension of Bernoulli, Euler and Eulerian polynomials. 91e:11023
- Todorov, Pavel G. Recurrence relations for certain polynomials. (Serbo-Croatian summary) 91g:11019

#### Items with secondary classifications in 11B68

- Ersvall, R. (with Metsänkylä, T.) Cyclotomic invariants for primes between 125 000 and 150 000. 91b:11157
- Gould, H. W. Series transformations for finding recurrences for sequences. 91b:11016
- Ishibashi, Makoto An elementary proof of the generalized Eisenstein formula. 91k:11075
- Kozuka, Kazuhito On the values of the  $p$ -adic value of the generalized Euler numbers. 91a:11062a
- On the  $\mu$ -invariant of an interpolating power series of the generalized Euler numbers. 91a:11062b
- Metsänkylä, T. see Ersvall, R., 91b:11157
- Rutkowski, Jerzy A  $p$ -adic analogue of the Legendre system. 91b:11134
- Tsumura, Hirofumi On the values of a  $q$ -analogue of the  $p$ -adic  $L$ -functions. 91b:11137

#### 11B73 Bell and Stirling numbers

- Davis, Donald M. Divisibility by 2 of Stirling-like numbers. 91b:11021
- Howard, F. T. Congruences for the Stirling numbers and associated Stirling numbers. 91g:11020
- Todorov, Pavel G. On certain formulas for the Stirling numbers of the first and the second kind. 91b:11011

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- Gao, Jun Bin Multivariate Stirling numbers and their properties. (Chinese summary) 91d:11063
- Gould, H. W. Series transformations for finding recurrences for sequences. 91b:11016
- Keller, Joseph B. see Knessl, Charles, 91c:05017

- Knessl, Charles (with Keller, Joseph B.) Stirling number asymptotics from recursion equations using the ray method. 91c:05017
- Marcus, Dănuț A note on the Stirling numbers. (Italian summary) 91c:05022
- Singh, Manmohan  $n$ th-order derivatives of certain inverses and the Bell polynomials. 91k:05005

#### 11B75 Other combinatorial number theory

- Abbott, H. L. Sidon sets. 91k:11022
- Alon, Noga (with Krasikov, I.; Peres, Y.) Reflection sequences. 91c:11013
- Ando, Kiyoshi (with Gervacio, Severino V.; Kano, Mikio) Disjoint subsets of integers having a constant sum. 91b:11022
- Ehrlich, Amos Periods in Ducci's  $n$ -number game of differences. 91m:11013
- Gervacio, Severino V. see Ando, Kiyoshi; et al., 91b:11022
- Kano, Mikio see Ando, Kiyoshi; et al., 91b:11022
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Churchhouse, Robert F. Representation of integers as sums of squares of primes. 91k:11090  
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Kern, Hans (with Rung, Josef) Ein Weg zu den rationalen Punkten auf der Kugel oder: Wozu die komplexen Zahlen auch gut sind. [An approach to the rational points on the sphere, or: Another thing complex numbers are good for] 91a:11002  
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### 11Exx Forms and linear algebraic groups {For quadratic forms in linear algebra, see 15A63.}

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### 11E20 General ternary and quaternary quadratic forms; forms of more than two variables

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### 11E25 Sums of squares and representations by other particular quadratic forms

- Gongadze, R. Sh. The number of representations of numbers by quadratic forms of the types  $(-3, 7, x)$ ,  $(-3, 11, x)$  and  $(-13, 3, x)$ . (Russian. English and Georgian summaries) 91k:11027
- Hiramatsu, Toyokazu (with Mimura, Yoshio) On numbers of type  $x^2 + Ny^2$ . 91m:11026
- Köhler, Günter<sup>1</sup> On two of Liouville's quaternary forms. 91b:11038
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- Askey, Richard The number of representations of an integer as the sum of two squares. 91h:33026
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Kung, Joseph P. S. Canonical forms of binary forms: variations on a theme of Sylvester.

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— Correction to the paper: "Binary forms and unramified  $A_n$ -extensions of quadratic fields" [J. Reine Angew. Math. 406 (1990), 167–178; MR 91d:11037]. 91j:11019

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### 11E81 Algebraic theory of quadratic forms; Witt groups and rings [see also 19G12, 19G24]

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 Elstrodt, J. (with Grunewald, Fritz; Mennicke, J.) Kloosterman sums for Clifford algebras and a lower bound for the positive eigenvalues of the Laplacian for congruence subgroups acting on hyperbolic spaces. 91j:11038  
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 Hashimoto, Ki-ichiro (with Hori, Akira) Selberg-Ihara's zeta function for  $p$ -adic discrete groups. 91j:11053  
 — Zeta functions of finite graphs and representations of  $p$ -adic groups. 91b:11057

- Hori, Akira *see* Hashimoto, Ki-ichiro, 91j:11053  
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 Koyama, Shin-ya Determinant expression of Selberg zeta functions. I. 91b:11043  
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 Mozzochi, C. J. An upper bound for  $\lambda_1$  for  $\Gamma(q)$  and  $\Gamma_0(q)$ . 91g:11054  
 Patterson, S. J. The Selberg zeta-function of a Kleinian group. 91c:11029  
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 Venkov, A. B. On essentially cuspidal noncongruence subgroups of  $\mathrm{PSL}(2, \mathbb{Z})$ . 91b:11058  
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- Antoine, Michel (with Comtet, Alain; Ouvre, Stéphane) Scattering on a hyperbolic torus in a constant magnetic field. 91m:81316  
 Bolte, J. (with Steiner, F.) Determinants of Laplace-like operators on Riemann surfaces. 91f:58099  
 Brooks, Robert Wolfe (with Tse, Richard) Correction to: "Isospectral surfaces of small genus" [Nagoya Math. J. 107 (1987), 13–24; MR 88m:58182]. 91a:58189  
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 Denert, M. Type number and class number of hereditary orders in non-Eichler ( $R$ )-algebras of prime index over global function fields. 91j:11100  
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 Freitag, Eberhard ★ Hilbert modular forms. 91c:11025  
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 Hakim, Jeff Sur le caractère relatif. (English summary) [On the relative character] 91b:22024  
 Hoffmann, Werner On a trace formula for Hecke operators. 91g:22017  
 Joyner, D. Addendum: "On the Kuznetsov-Bruggeman formula for a Hilbert modular surface having one cusp" [Math. Z. 263 (1990), no. 1, 59–104; MR 90k:11059]. 91b:11034  
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#### 11F75 Cohomology of arithmetic groups

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- Clozel, Laurent Motifs et formes automorphes: applications du principe de functorialité. [Motives and automorphic forms: applications of the functoriality principle] 91k:11042  
 Harris, Michael Period invariants of Hilbert modular forms. I. Trilinear differential operators and  $L$ -functions. 91j:11031  
 Kirwan, Frances (with Lee, Ronnie) The cohomology of moduli spaces of  $K3$  surfaces of degree 2. II. 91e:14034  
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 Oda, Takayuki The Riemann-Hodge period relation for Hilbert modular forms of weight 2. 91j:11035  
 Wang, Xiang Dong ★ Die Eisensteinklasse in  $H^1(\mathrm{SL}_2(\mathbb{Z}), M_n(\mathbb{Z}))$  und die Arithmetik spezieller Werte von  $L$ -Funktionen. (German) [The Eisenstein class in  $H^1(\mathrm{SL}_2(\mathbb{Z}), M_n(\mathbb{Z}))$  and the arithmetic of special values of  $L$ -functions] 91f:11038

#### 11F80 Galois properties

- Blasius, Don Automorphic forms and Galois representations: some examples. 91b:11067  
 Boston, Nigel Explicit deformation of Galois representations. 91j:11041

- Gross, Benedict H. A tameness criterion for Galois representations associated to modular forms (mod  $p$ ). 91b:11060  
 Ribet, Kenneth A. Raising the levels of modular representations. 91g:11055  
 Taylor, Richard. Representations of Galois groups associated to Hilbert modular forms. 91a:11024

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- Carayol, Henri. Sur les représentations galoisiennes modulo  $\ell$  attachées aux formes modulaires. [On Galois representations modulo  $\ell$  associated with modular forms] 91b:11058  
 Chinburg, Ted. A quaternionic  $L$ -value congruence. 91a:11058  
 Clozel, Laurent. Motifs et formes automorphes: applications du principe de functorialité. [Motives and automorphic forms: applications of the functoriality principle] 91k:11042  
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 — Deforming Galois representations: controlling the conductor. 91b:11068  
 Henniart, Guy. Formes de Maass et représentations galoisiennes (d'après Blasius, Clozel, Harris, Ramakrishnan et Taylor). [Maass forms and Galois representations (after Blasius, Clozel, Harris, Ramakrishnan and Taylor)] 91e:11055  
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#### 11F85 $p$ -adic theory, local fields [see also 14G20, 22E50]

- Gouvêa, Fernando Q.  $\star$  Arithmetic of  $p$ -adic modular forms. 91e:11056  
 — Deforming Galois representations: controlling the conductor. 91b:11068  
 Mazur, Barry C. Two-dimensional  $p$ -adic Galois representations unramified away from  $p$ . 91g:11056

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- Cohen, Paula Maria. Heights of torsion points on commutative group varieties. II. 91k:14031  
 Hida, Haruzo.  $p$ -adic  $L$ -functions for base change lifts of  $\text{GL}_2$  to  $\text{GL}_3$ . 91h:11133  
 Papier, Elisabeth. Représentations  $\ell$ -adiques. [ $\ell$ -adic representations] 91e:11048  
 Perrin-Riou, Bernadette. Représentations  $p$ -adiques, périodes et fonctions  $L$   $p$ -adiques. [ $p$ -adic representations,  $p$ -adic periods and  $p$ -adic  $L$  functions] 91k:11109  
 Satō, Fumihito. On functional equations of zeta distributions. 91h:11114  
 Teitelbaum, Jeremy T. Geometry of an étale covering of the  $p$ -adic upper half plane. (French summary) 91h:11066  
 — Values of  $p$ -adic  $L$ -functions and a  $p$ -adic Poisson kernel. 91m:11034  
 Tilouine, J. Sur la conjecture principale anticyclotomique. [On the main anticyclotomic conjecture] 91b:11118  
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#### 11F99 None of the above, but in this section

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- Hewitt, P. R. On the divisor of involutions in an elliptic modular surface. 91b:14049  
 (Landweber, Peter S.) *see* Elliptic curves and modular forms in algebraic topology, 91a:57021  
 Lehner, J. The local Hurwitz constant and Diophantine approximation on Hecke groups. 91c:11036  
 Segal, Graeme. Elliptic cohomology (after Landweber-Stong, Ochanine, Witten, and others). 91b:55005

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###### Conference:

- Elliptic Curves and Modular Forms in Algebraic Topology  $\star$  Elliptic curves and modular forms in algebraic topology. 91a:57021  
 Elliptic curves and modular forms in algebraic topology  $\star$  Elliptic curves and modular forms in algebraic topology. 91a:57021  
 Lecture Notes in Mathematics  $\star$  Elliptic curves and modular forms in algebraic topology. 91a:57021  
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#### 11Gxx Arithmetic algebraic geometry (Diophantine geometry) [see also 11Dxx, 14Gxx, 14Kxx]

(Szpiro, Lucien) *see* Seminar: Pencils of Elliptic Curves, 91e:11057

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- Paris  $\star$  Séminaire sur Les Pinceaux de Courbes Elliptiques. (French) [Seminar on Pencils of Elliptic Curves] 91e:11057

###### Seminar:

- Pencils of Elliptic Curves  $\star$  Séminaire sur Les Pinceaux de Courbes Elliptiques. (French) [Seminar on Pencils of Elliptic Curves] 91e:11057

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 (Steenbrink, J. H. M.) *see* Arithmetic algebraic geometry, 91h:11002

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#### 11G05 Elliptic curves over global fields [see also 14H52]

- Antoniadis, J. A. (with Bungert, M.; Frey, Gerhard) Properties of twists of elliptic curves. 91b:11069  
 Baldassarri, F. Algebraic solutions of the Lamé equation and torsion of elliptic curves. (Italian. English summary) 91d:11058  
 Bertrand, Daniel. Hauteurs et isogénies. [Heights and isogenies] 91m:11039  
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 Comalada, Salvador. Elliptic curves with trivial conductor over quadratic fields. 91e:11058  
 Dem'yanenko, V. A. A property of coordinates of points of curves of genus 1. I. (Russian) 91h:11044  
 Flexor, Marguerite (with Oesterlé, J.) Sur les points de torsion des courbes elliptiques. [On the torsion points of elliptic curves] 91g:11057  
 Fols, Helmut G. (with Zimmer, Horst G.) A boundedness theorem for the torsion of elliptic curves over algebraic number fields. 91d:11059  
 Frey, Gerhard *see* Antoniadis, J. A.; et al., 91b:11069  
 Fung, G. W. (with Strömberg, H.; Williams, Hugh Cowie; Zimmer, Horst G.) Torsion groups of elliptic curves with integral  $j$ -invariant over pure cubic fields. 91h:11061  
 Gupta, Rajiv. Division fields of  $Y^2 = X^3 - aX$ . 91h:11062  
 Kuwata, Masato. The field of definition of the Mordell-Weil group of an elliptic curve over a function field. 91j:11042  
 — The canonical height and elliptic surfaces. 91h:11045  
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 — (with Wüstholz, G.) Estimating isogenies on elliptic curves. 91d:11060  
 Monsky, Paul. Mock Heegner points and congruent numbers. 91e:11059  
 Narzullaev, U. Kh. Divisibility of principal homogeneous spaces. (Russian) 91d:11061  
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 Pethő, Attila (with Zimmer, Horst G.) Lineare rekurrente Folgen auf elliptischen Kurven. [Linear recurrent sequences on elliptic curves] 91k:11044  
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 Shioda, Goro. Construction of elliptic curves over  $\mathbb{Q}(t)$  with high rank: a preview. 91d:11062  
 Silverman, Joseph H. The difference between the Weil height and the canonical height on elliptic curves. 91d:11063  
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 Szpiro, Lucien. Discriminant et conducteur des courbes elliptiques. [Discriminant and conductor of elliptic curves] 91g:11059  
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##### Items with secondary classifications in 11G05

- Agrawal, M. K. *see* Parnami, J. C.; et al., 91g:11091  
 Bertrand, Daniel. Transcendental methods in arithmetic geometry. 91k:11047  
 Boston, Nigel. Explicit deformation of Galois representations. 91j:11041  
 Brumer, Armand (with McGuinness, Oisín) The behavior of the Mordell-Weil group of elliptic curves. 91b:11076  
 Chudnovsky, David V. (with Chudnovsky, G. V.) Elliptic formal groups over  $\mathbb{Z}$  and  $\mathbb{F}_p$  in applications to number theory, computer science and topology. (*see* 91a:57021)  
 Chudnovsky, G. V. *see* Chudnovsky, David V., (91a:57021)  
 Comalada, Salvador. Courbes elliptiques à bonne réduction d'invariant  $j$  fixé. (English summary) [Elliptic curves having good reduction and a given  $j$ -invariant] 91j:11044  
 Fleckinger, Vincent. Étude de la courbe elliptique  $y^2 = 4x^3 - 27((3 + \sqrt{-19})/2)^2$  et monogénéité de certains anneaux d'entiers. [Study of the elliptic curve  $y^2 = 4x^3 - 27((3 + \sqrt{-19})/2)^2$  and monogeneity of some rings of integers] 91g:11070  
 Frey, Gerhard (with Kani, Ernst) Curves of genus 2 covering elliptic curves and an arithmetical application. 91k:14014  
 Goldstein, Catherine. Quoi de neuf sur la conjecture de Birch et Swinnerton-Dyer? [What is new about the Birch-Swinnerton-Dyer conjecture?] 91k:11050  
 Gordon, Daniel M. Pseudoprimes on elliptic curves. 91g:11158  
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 Ravenel, Douglas C. Complex cobordism theory for number theorists. (*see* 91a:57021)  
 Rubin, Karl. The work of Kolyvagin on the arithmetic of elliptic curves. 91h:11070



- Shioda, Tetsuji On the Mordell-Weil lattices. 91m:14056
- Srivastav, Anupam (with Taylor, Martin J.) Elliptic curves with complex multiplication and Galois module structure. 91b:11127
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- (Sapiro, Lucien) see Seminar: Pencils of Elliptic Curves, 91e:11057
- Taylor, Martin J. see Srivastav, Anupam, 91b:11127
- Wan, Da Qing On the Lang-Trotter conjecture about elliptic curves. (Chinese summary) 91f:11078
- On the Lang-Trotter conjecture. 91f:11079
- Wingberg, Kay On the étale  $K$ -theory of an elliptic curve with complex multiplication for regular primes. 91i:11064
- Zagier, Don Elliptische Kurven: Fortschritte und Anwendungen. [Elliptic curves: advances and applications] 91e:11029

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## 11G07 Elliptic curves over local fields [see also 14G20, 14H52]

- Comalada, Salvador Courbes elliptiques à bonne réduction d'invariant  $j$  fixé. (English summary) [Elliptic curves having good reduction and a given  $j$ -invariant] 91j:11044
- Crew, Richard Universal extensions and  $p$ -adic periods of elliptic curves. 91k:11045
- Kraus, Alain Sur le défaut de semi-stabilité des courbes elliptiques à réduction additive. (English summary) [On the failure of semistability of elliptic curves with additive reduction] 91j:11045

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- Cohen, Paula Maria Heights of torsion points on commutative group varieties. II. 91i:14031
- Flexor, Marguerite (with Oesterlé, J.) Sur les points de torsion des courbes elliptiques. [On the torsion points of elliptic curves] 91g:11057
- Jones, John William A comparison of Selmer groups. 91h:11052
- Kato, Goro Lifted  $p$ -adic homology with compact supports of the Weierstrass family and its zeta endomorphism. 91h:11048
- Oesterlé, J. see Flexor, Marguerite, 91g:11057
- Voloch, José Felipe Explicit  $p$ -descent for elliptic curves in characteristic  $p$ . 91f:11042

## 11G09 Drinfel'd modules; higher-dimensional motives, etc. [see also 14L05]

- Anderson, Greg W. (with Thakur, Dinesh S.) Tensor powers of the Carlitz module and zeta values. 91h:11046
- Diarra, Bertin Exponentielles en caractéristique  $p$  (modules elliptiques ou de Drinfel'd). [Exponential functions of characteristic  $p$  (elliptic or Drinfel'd modules)] 91k:11046
- Gekeler, Ernst-Ulrich de Rham cohomology and the Gauss-Manin connection for Drinfel'd modules. 91m:11040
- Hayes, David R. On the reduction of rank-one Drinfel'd modules. 91j:11046
- Thakur, Dinesh S. see Anderson, Greg W., 91h:11046

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- Bertrand, Daniel Transcendental methods in arithmetic geometry. 91k:11047
- (Bloch, Spencer) see Jannsen, Uwe, 91g:14008
- Chérif, Habib Mesure d'irrationalité de valeurs de la fonction zêta de Carlitz sur  $F_q[T]$ . (English summary) [An irrationality measure for values of Carlitz's zeta function of  $F_q[T]$ ] 91c:11064
- Deninger, Christopher Higher regulators and Hecke  $L$ -series of imaginary quadratic fields. II. 91f:19003
- Demis, Laurent Théorème de Baker et modules de Drinfel'd. (English summary) [Drinfel'd modules and Baker's theorem] 91i:11086
- Gekeler, Ernst-Ulrich Sur les classes d'idéaux des ordres de certains corps gauches. (English summary) [On the class numbers of orders of certain division algebras] 91d:11143
- Jannsen, Uwe ★ Mixed motives and algebraic  $K$ -theory. 91g:14008
- Milne, J. S. The conjecture of Langlands and Rapoport for Siegel modular varieties. 91h:11047
- Murre, J. P. On the motive of an algebraic surface. 91g:14003
- (Schoen, Chad) see Jannsen, Uwe, 91g:14008
- Scholl, A. J. Motives for modular forms. 91e:11054
- Teitelbaum, Jeremy T. Geometry of an étale covering of the  $p$ -adic upper half plane. (French summary) 91i:11066
- Wintenberger, Jean-Pierre Torseurs pour les motifs et pour les représentations  $p$ -adiques potentiellement de type CM. [Principal homogeneous spaces for motives and  $p$ -adic representations potentially of CM type] 91g:11067
- Yu, Jing On periods and quasi-periods of Drinfel'd modules. 91h:11089

## 11G10 Abelian varieties of dimension $> 1$ [see also 14Kxx]

- Bertrand, Daniel Transcendental methods in arithmetic geometry. 91k:11047
- Brown, Martin Lawrence The tame fundamental group of an abelian variety and integral points. 91a:11025
- Chai, Wen-Chên On the Tate modules of absolutely simple abelian varieties of type II. 91k:11048
- Hasse invariants of some endomorphism algebras of abelian varieties. 91e:11061
- On the  $L$ -adic representations attached to some absolutely simple abelian varieties of type II. 91g:11060
- Faltings, Gerd Recent progress in arithmetic algebraic geometry. 91g:11061

- Ishii, Hiidenori The nonexistence of abelian varieties of type  $(K)$  with everywhere good reduction over imaginary quadratic fields. 91e:11062
- Kolyagin, V. A. (with Logachev, D. Yu.) Finiteness of the Shafarevich-Tate group and the group of rational points for some modular abelian varieties. 91c:11032
- Logachev, D. Yu. see Kolyagin, V. A., 91c:11032
- McCallum, William G. Tate duality and wild ramification. 91m:11041
- Silverberg, Alice Universal families of abelian varieties. 91m:11042
- Zarkhin, Yu. G.  $p$ -adic heights on abelian varieties. 91f:11043
- Finiteness theorems for dimensions of irreducible  $L$ -adic representations. 91m:11043

Items with secondary classifications in 11G10

- Abrashkin, V. A. Modification of the Fontaine-Laffaille functor. 91e:14044
- Bosch, Siegfried (with Lütkebohmert, Werner; Raynaud, Michel) ★ Néron models. 91i:14034
- Chai, Ching-Li (with Norman, Peter) Bad reduction of the Siegel moduli scheme of genus two with  $\Gamma_0(p)$ -level structure. 91i:14033
- Deninger, Christopher (with Nart, Enric) Formal groups and  $L$ -series. 91i:14036
- Hatada, Kazuyuki Correspondences for Hecke rings and (co-)homology groups on smooth compactifications of Siegel modular varieties. 91j:11032a
- Corrections of printing to: "Correspondences for Hecke rings and (co-)homology groups on smooth compactifications of Siegel modular varieties". 91j:11032b
- Jones, John William  $p$ -adic heights for semi-stable abelian varieties. 91h:14050
- Lütkebohmert, Werner see Bosch, Siegfried; et al., 91i:14034
- Nart, Enric see Deninger, Christopher, 91i:14036
- Narzullov, U. Kh. Divisibility of principal homogeneous spaces. (Russian) 91d:11061
- Norman, Peter see Chai, Ching-Li, 91i:14033
- Pila, J. Frobenius maps of abelian varieties and finding roots of unity in finite fields. 91a:11071
- Raynaud, Michel see Bosch, Siegfried; et al., 91i:14034
- Srivastav, Anupam (with Taylor, Martin J.) Elliptic curves with complex multiplication and Galois module structure. 91b:11127
- Taylor, Martin J. see Srivastav, Anupam, 91b:11127

## 11G15 Complex multiplication and moduli of abelian varieties [see also 14K22]

- Call, Gregory S. Variation of local heights on an algebraic family of abelian varieties. 91c:11063
- Chai, Ching-Li Arithmetic minimal compactification of the Hilbert-Blumenthal moduli spaces. 91i:11063
- Kaneko, Masanobu Supersingular  $j$ -invariants as singular moduli mod  $p$ . 91c:11033
- Kuga, Michio Invariants and Hodge cycles. 91g:11062
- Wingberg, Kay On the étale  $K$ -theory of an elliptic curve with complex multiplication for regular primes. 91i:11064

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- Bertolini, Massimo (with Darmon, Henri) Kolyagin's descent and Mordell-Weil groups over ring class fields. 91j:11048
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- Alba, Akira<sup>2</sup> A remark on elliptic units. 91c:11034
- Lévesque, Odile Unités d'une famille de corps liés à la courbe  $X_1(25)$ . (English summary) [Units of a family of fields associated with the curve  $X_1(25)$ ] 91h:11065

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- Ichimura, Humio A note on the universal power series for Jacobi sums. 91e:11124
- de Shalit, Ehud A note on norm-coherent units in certain  $Z_p$ -extensions. 91m:11089
- Tilouine, J. Sur la conjecture principale anticyclotomique. [On the main anticyclotomic conjecture] 91b:11118

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- Harris, Michael Automorphic forms and the cohomology of vector bundles on Shimura varieties. 91g:11063
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- Milne, J. S. Canonical models of (mixed) Shimura varieties and automorphic vector bundles. 91c:11027
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- Carayol, Henri Sur les représentations galoisiennes modulo  $l$  attachées aux formes modulaires. [On Galois representations modulo  $l$  associated with modular forms] 91b:11058
- Chai, Ching-Li Arithmetic minimal compactification of the Hilbert-Blumenthal moduli spaces. 91i:11063
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- Ito, Hideki On the number of rational cyclic subgroups of elliptic curves over finite fields. 91d:11065
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- Perret, Marc Sur le nombre de points d'une courbe sur un corps fini; application aux codes correcteurs d'erreurs. (English summary) [On the number of points of a curve over a finite field; application to error-correcting codes] 91d:11066

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- Katz, Nicholas M. Exponential sums over finite fields and differential equations over the complex numbers: some interactions. 91d:11067
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#### 11G30 Curves of arbitrary genus or genus $\neq 1$ over global fields [see also 14H25]

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- Coombes, Kevin R. (with Grant, David R.) On heterogeneous spaces. 91d:11069
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- Katsura, Toshiyuki (with Shimizu, Yuji; Ueno, Kenji) Formal groups and conformal field theory over  $\mathbb{Z}$ . 91d:14029
- Kur'mina, L. V. Analogue of the Riemann-Hurwitz formula for a certain type of  $l$ -extension of algebraic number fields. 91f:11070
- Rumely, Robert S. Capacity theory on algebraic curves. 91h:14018
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- Batyrev, V. V. (with Manin, Yu. I.) Sur le nombre des points rationnels de hauteur bornée des variétés algébriques. [On the number of rational points of bounded height of algebraic varieties] 91g:11069
- Chinkel, Yu. Rational points and heights. (Russian) 91h:11050
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- Franke, Jens (with Manin, Yu. I.; Chinkel, Yu.) Erratum: "Rational points of bounded height on Fano varieties" [Invent. Math. 95 (1989), no. 2, 421–435; MR 89m:11060]. 91i:11068
- Langmann, Klaus Primzahlfragen in der Diophantischen Geometrie. [Prime-number problems in Diophantine geometry] 91f:11045
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- Douai, Jean-Claude Sur les extensions totalement décomposées de certains corps de fonctions. [On completely decomposed extensions of certain function fields] 91g:11071  
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- Önsiper, Hürşit Corrigendum: "On generalized Albanese varieties for surfaces" [Math. Proc. Cambridge Philos. Soc. 104 (1988), no. 1, 1-6; MR 89i:14040]. 91a:14027

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- Beck, József On a lattice-point problem of H. Steinhaus. 91h:11072

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- Matsumoto, Takeo Corrections to: "Packing of ellipsoids" [Proc. Inst. Statist. Math. 36 (1988), no. 2, 185-194; MR 90j:11058]. (Japanese) 91d:11071  
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- Chen, Ting-Chung A lattice vector quantization using a geometric decomposition. 91b:54027
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- Hurkens, C. A. J. Blowing up convex sets in the plane. 91b:52009
- Janwa, Heeralal Some optimal codes from algebraic geometry and their covering radii. 91g:54030
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- Sadoc, Jean-François *see* Sire, Clément; et al., 91c:52026
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spherical case, the one-point compactifications of  $\mathbb{R}^n$  and  $\mathbb{C}^n$ , real and complex projective space] 91c:11040d

— Beiträge zur Theorie der Gleichverteilung und ihren Anwendungen. V. Der Fall der unitären Gruppe. [Contributions to the theory of uniform distribution and its applications. V. The case of the unitary group] 91c:11040e

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Hlawka, Edmund Über die direkten Methoden der Variationsrechnung und Gleichverteilung. [On direct methods of variational calculus and uniform distribution] 91d:49002

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- Lesigne, Emmanuel (with Petersen, Karl) Bounded exponential sums. 91k:47017  
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- Knopfmacher, Arnold (with Knopfmacher, John) Normality of some  $p$ -adic product expansions. 91d:11092  
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- Barbosa, D. Sur le développement en fractions continues à quotients partiels impairs. (English summary) [Continued fraction expansion with odd partial quotients] 91d:11094  
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- Patterson, S. J. Metric Diophantine approximation of quadratic forms. 91f:11057  
 Samur, Jorge D. A functional central limit theorem in Diophantine approximation. 91g:11087  
 Tarkhov, D. A. Integration of almost periodic functions and infinite-dimensional theory of Diophantine approximation. 91m:11058

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- Rynne, Bryan P. The Hausdorff dimension of certain sets of singular  $n$ -tuples. 91d:11097

### 11K65 Arithmetic functions [see also 11Nxx]

- Bareikis, G. A problem of moderate deviations for integer-valued additive arithmetic functions. The local case. 91b:11087  
 Evliker, V. V. Estimation of deviation for a class of additive functions. (Russian) 91d:11098  
 Indlekofer, K.-H. Limit laws and moments of additive functions in short intervals. 91c:11090  
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 Slattery, P. G. *see* Knopfmacher, John, 91d:11099

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- de la Cal, Jesús On the limit distribution of multiplicative functions with values in the interval  $[-1, 1]$ . 91e:11103  
 Fehér, J. On real-valued  $R$ -additive functions. 91e:11102  
 Hensley, Douglas The distribution of  $\Omega(n)$  among numbers with no large prime factors. 91c:11056

Pétermann, Y.-F. S. Distribution of values of a real function. Means, moments, and symmetry. 91j:11083

Rejali, Ali Asymptotic expansions for the moments of additive arithmetic functions. 91k:11081

### 11K70 Harmonic analysis and almost periodicity

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- Bourgain, J. Problems of almost everywhere convergence related to harmonic analysis and number theory. 91k:42011  
 van der Poorten, Alfred J. (with Schlickewei, Hans Peter) A Diophantine problem in harmonic analysis. 91j:11052  
 Schlickewei, Hans Peter *see* van der Poorten, Alfred J., 91j:11052

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- Dumont, J.-M. Summation formulae for substitutions on a finite alphabet. 91g:11088  
 Hilton, Peter (with Pedersen, Jean) A conjecture on sums of random integers. 91h:11100  
 Key, Eric S. A probabilistic approach to a conjecture of Ramanujan. 91d:11100  
 Moser, Jan Zeros of a random process generated by the Riemann-Siegel formula. (Russian. English and Slovak summaries) 91k:11070  
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- Bourgain, J. Double recurrence and almost sure convergence. 91d:28029  
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 Schatte, Peter On the stochastic behaviour of the floating point mantissas of sums. (German and Russian summaries) 91m:60065  
 Sinai, Ya. G. Limit theorems for multiple trigonometric Weyl sums. (Russian) 91e:11092

### 11Lxx Exponential sums and character sums {For finite fields, see 11Txx.}

#### 11L03 Trigonometric and exponential sums, general

- Elstrator, I. V. Some rational trigonometric sums. (Russian) 91g:11089  
 Kudryavtsev, M. V. Structural formulas in a class of Heilbronn-Karatsuba trigonometric sums. 91e:11091  
 Lu, Ming Gao A note on complete trigonometric sum for prime power. (Chinese summary) 91g:11090

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- Beebe, John Some trigonometric identities related to exact covers. 91h:11013  
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 Dombrovskii, I. R. *see* Vil'chinskii, V. T., 91h:11080  
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 Huxley, M. N. Exponential sums and the Riemann zeta function. 91b:11088  
 Iwaniec, Henryk *see* Fouvry, Étienne, 91h:11097  
 Moore, R. R. (with van der Poorten, Alfred J.) On the thermodynamics of curves and other curlicues. 91d:11168  
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 Smith, Brent *see* Saffari, Bahman, 91f:42002  
 Vil'chinskii, V. T. (with Dombrovskii, I. R.) The Hausdorff dimension and estimates for trigonometric sums over prime numbers. (Russian. English summary) 91h:11080

#### 11L05 Gauss and Kloosterman sums; generalizations

- Barkas, Philippe Démonstration d'une conjecture de K. Yamamoto sur les sommes de Gauss biquadratiques. (English summary) [Proof of a conjecture of K. Yamamoto on biquadratic Gauss sums] 91f:11058  
 Carpenter, Michel Sommes exponentielles dont la géométrie est très belle:  $p$ -adic estimates. (English) [Exponential sums with a very beautiful geometry:  $p$ -adic estimates] 91c:11047  
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 Miki, Hiroo On the congruence for Gauss sums and its applications. 91h:11083  
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 Anderson, Greg W. The evaluation of Selberg sums. (French summary) 91m:11109  
 Coleman, Robert F. Errata: "The Gross-Koblitz formula" [in *Galois representations and arithmetic algebraic geometry* (Kyoto, 1985/Tokyo, 1986), 21–52, Adv. Stud. Pure Math., 12, North-Holland, Amsterdam, 1987; MR 89e:11073]. 91m:11106  
 Duke, W. (with Iwaniec, Henryk) Bilinear forms in the Fourier coefficients of half-integral weight cusp forms and sums over primes. 91b:11059



- Elstrodt, J. (with Grunewald, Fritz; Mennicke, J.) Kloosterman sums for Clifford algebras and a lower bound for the positive eigenvalues of the Laplacian for congruence subgroups acting on hyperbolic spaces. 91j:11038
- Grunewald, Fritz see Elstrodt, J.; et al., 91j:11038
- Iwaniec, Henryk see Duke, W., 91b:11059
- Katz, Nicholas M. ★ Gauss sums, Kloosterman sums, and monodromy groups. 91a:11028
- (with Livné, Ron) Sommes de Kloosterman et courbes elliptiques universelles en caractéristiques 2 et 3. (English summary) [Kloosterman sums and universal elliptic curves in characteristics 2 and 3] 91e:11066
- Livné, Ron see Katz, Nicholas M., 91e:11066
- Mennicke, J. see Elstrodt, J.; et al., 91j:11038
- Suwa, Noriyuki A  $p$ -adic limit formula for Gauss sums. 91h:11135

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### 11L07 Estimates on exponential sums

- Heath-Brown, D. R. (with Huxley, M. N.) Exponential sums with a difference. 91i:11101
- Huxley, M. N. (with Watt, Nigel) The Hardy-Littlewood method for exponential sums. 91d:11101
- see also Heath-Brown, D. R., 91i:11101
- Jutila, M. Mean value estimates for exponential sums. II. 91m:11060
- Nechaev, V. I. On the least upper bound on the modulus of complete trigonometric sums of degrees three and four. (Russian) 91f:11059
- Watt, Nigel see Huxley, M. N., 91d:11101

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- Adolphson, Alan (with Sperber, Steven) Exponential sums and Newton polyhedra: cohomology and estimates. 91e:11094
- Bassalygo, L. A. (with Zinov'ev, V. A.; Litsyn, S. N.) Lower bound of overall exponential sums for polynomials  $\phi(x^2)$ . 91h:11174
- Huxley, M. N. Exponential sums and lattice points. 91m:11082
- Litsyn, S. N. see Bassalygo, L. A.; et al., 91h:11174
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- Watt, Nigel An elementary treatment of a general Diophantine problem. 91i:11131
- Zhang, Wen Peng The Hurwitz zeta-function. (Chinese) 91h:11089
- Zinov'ev, V. A. see Bassalygo, L. A.; et al., 91h:11174

### 11L10 Jacobsthal and Brewer sums; other complete character sums

- Agrawal, M. K. see Parnami, J. C.; et al., 91g:11091
- Katre, S. A. (with Rajwade, A. R.) On the Jacobsthal sum  $\phi_4(a)$  and the related sum  $\psi_3(a)$ . 91a:11038
- Parnami, J. C. (with Agrawal, M. K.; Rajwade, A. R.) Some identities involving character sums and their applications. 91g:11091
- Rajwade, A. R. see Katre, S. A., 91a:11038 and Parnami, J. C.; et al., 91g:11091
- Toyozumi, Masao On certain character sums. 91h:11084

### 11L15 Weyl sums

- Sinai, Ya. G. Limit theorems for multiple trigonometric Weyl sums. (Russian) 91e:11092

### 11L20 Sums over primes

- Pan, Cheng Biao see Pan, Cheng Dong, 91c:11048; 91e:11093 and 91g:11092
- Pan, Cheng Dong (with Pan, Cheng Biao) On estimations of trigonometric sums over primes in short intervals. I. 91c:11048
- (with Pan, Cheng Biao) On estimations of trigonometric sums over primes in short intervals. II. 91e:11093
- (with Pan, Cheng Biao) On estimations of trigonometric sums over primes in short intervals. III. 91g:11092

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- Baker, R. C. (with Harman, Glyn) Sequences with bounded logarithmic discrepancy. 91d:11091
- Duke, W. (with Iwaniec, Henryk) Bilinear forms in the Fourier coefficients of half-integral weight cusp forms and sums over primes. 91b:11059
- Harman, Glyn see Baker, R. C., 91d:11091
- Iwaniec, Henryk see Duke, W., 91b:11059

### 11L40 Estimates on character sums

- Adolphson, Alan (with Sperber, Steven) Exponential sums and Newton polyhedra: cohomology and estimates. 91e:11094
- Burgess, D. A. On a set of congruences related to character sums. II. 91d:11102
- Ding, Ping (with Qi, Ming Gao) Further estimate of complete trigonometric sums. 91m:11061
- Karatsuba, A. A. On a Diophantine inequality. (Russian) 91a:11039
- Qi, Ming Gao see Ding, Ping, 91m:11061
- Shparlinskii, I. E. see Stepanov, S. A., 91m:11062
- Sperber, Steven see Adolphson, Alan, 91e:11094
- Stepanov, S. A. (with Shparlinskii, I. E.) An estimate for the incomplete sum of multiplicative characters of polynomials. (Russian) 91m:11062

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- Carpentier, Michel Sommes exponentielles dont la géométrie est très belle:  $p$ -adic estimates. (English) [Exponential sums with a very beautiful geometry:  $p$ -adic estimates] 91c:11047
- Harman, Glyn Approximation of real matrices by integral matrices. 91a:11031

- Jutila, M. Mean value estimates for exponential sums. II. 91m:11060
- Liu, Hong Quan On square-full numbers in short intervals. 91g:11105
- Moreno, Carlos J. (with Moreno, Oscar) Exponential sums and Goppa codes. I. 91f:11087
- Moreno, Oscar see Moreno, Carlos J., 91f:11087
- Panteleeva, E. I. On a problem of Dirichlet divisors in number fields. (Russian) 91d:11115
- Tolev, D. I. On the number of divisors of  $[n^2]$ . (Russian) 91d:11119
- Toyozumi, Masao On certain character sums. 91h:11084
- Watt, Nigel A problem on square roots of integers. 91h:11102

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- Pacheco, Amílcar The trace of the Cartier operator and character sums. 91m:14029

### 11Mxx Zeta and $L$ -functions: analytic theory

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- Knopfmacher, John ★ Abstract analytic number theory. 91d:11110

### 11M06 $\zeta(s)$ and $L(s, \chi)$

- Baker, R. C. (with Montgomery, Hugh L.) Oscillations of quadratic  $L$ -functions. 91c:11071
- Balasubramanian, Ramachandran (with Ramachandra, K.) On the frequency of Titchmarsh's phenomenon for  $\zeta(s)$ . VI. 91c:11102
- Bartz, K. M. On an effective order estimate of the Riemann zeta function in the critical strip. 91g:11093
- Emmynan, K. M.  $\chi$ -universality of the Dirichlet  $L$ -function. 91i:11103
- Ewell, John A. A new series representation for  $\zeta(3)$ . 91d:11103
- Funakura, Takeo On Kronecker's limit formula for Dirichlet series with periodic coefficients. 91j:11064
- Huxley, M. N. Exponential sums and the Riemann zeta function. 91b:11088
- Ivić, Aleksandar (with Perelli, A.) Mean values of certain zeta-functions on the critical line. 91d:11104
- On some integrals involving the mean square formula for the Riemann zeta-function. 91h:11085
- (with Motohashi, Yoichi) A note on the mean value of the zeta and  $L$ -functions. VII. 91h:11086
- (with Riele, H. J. J.) On the zeros of the error term for the mean square of  $|\zeta(\frac{1}{2} + it)|$ . 91e:11095
- Jutila, M. The fourth power moment of the Riemann zeta-function over a short interval. 91i:11104
- Laurinćikas, Antanas A limit theorem for the Riemann zeta function on the critical line. III. (Russian. English and Lithuanian summaries) 91e:11096
- A limit theorem for the Riemann zeta-function in the complex space. 91i:11105
- Matsumoto, Kohji The mean square of the Riemann zeta-function in the critical strip. 91i:11106
- Corrections to: "The mean square of Dirichlet  $L$ -functions" [Proc. Japan Acad. Ser. A Math. Sci. 58 (1982), no. 10, 443–446; MR 84f:10053]. 91a:11040
- The mean square of Dirichlet  $L$ -functions (a generalization of Balasubramanian's method). 91j:11065
- Montgomery, Hugh L. see Baker, R. C., 91c:11071
- Moser, Jan A curious formula of Hardy and Littlewood and some random processes generated by the Riemann-Siegel formula. (Russian. English and Slovak summaries) 91j:11066
- The Lyapunov theorem and the statistical length of an arc of a curve in Riemann zeta-function theory. (Russian. English and Slovak summaries) 91j:11067
- Motohashi, Yoichi A note on the mean value of the zeta and  $L$ -functions. VI. 91c:11102
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- Perelli, A. see Ivić, Aleksandar, 91d:11104
- Petermann, André A theorem on the zeta-function of argument 4. 91m:11063
- Ramachandra, K. see Balasubramanian, Ramachandran, 91i:11102
- de Riele, H. J. J. see Ivić, Aleksandar, 91e:11095
- Slavutskii, I. Sh. A remark on the note of Gh. Stoica: "A recurrence formula in the theory of the Riemann zeta function" [Stud. Cerc. Mat. 39 (1987), no. 3, 261–264; MR 88i:11060]. 91b:11089
- (Stoica, Gheorghe) see Slavutskii, I. Sh., 91b:11089
- Wu, Yun Fei Some series connected with the Riemann zeta function. (Chinese) 91m:11064
- Zhang, Wen Peng On Dirichlet  $L$ -functions. (Chinese) 91d:11105
- The mean square value of the Dirichlet  $L$ -functions. (Chinese. English summary) 91m:11065
- Mean square value formulas for  $L$ -functions. (Chinese) 91d:11106
- A note on a class of mean square values of  $L$ -functions. (Chinese. English summary) 91j:11068

Items with secondary classifications in 11M06

- Aarnes, Johan F. The Selberg trace formula and the Riemann zeta function. (Norwegian. English summary) (Not in MR)
- Bennett, Grahame Coin tossing and moment sequences. 91m:44005
- Bilal, Adel (with Gervais, Jean-Loup) Construction of constant curvature punctured Riemann surfaces with particle-scattering interpretation. 91e:81088
- Clark, D. M. (with Harkavy, A. A.; Silberger, Donald M.) The Riemann zeta and a normalization of complex-number sequences. 91d:11012
- Fujii, Akio On the distribution of the zeros of the Riemann zeta function in short intervals. 91g:11094
- Gervais, Jean-Loup see Bilal, Adel, 91e:81088
- Gracey, J. A. On the  $\beta$ -function for  $\sigma$  models with  $N = 1$  supersymmetry. 91g:81118
- Harkavy, A. A. see Clark, D. M.; et al., 91d:11012

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Lapidus, Michel L. (with Pomerance, Carl) Fonction zêta de Riemann et conjecture de Weyl-Berry pour les tambours fractals. (English summary) [The Riemann zeta-function and the Weyl-Berry conjecture for fractal drums] 91d:58248

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## 11M20 Real zeros of $L(s, \chi)$ ; results on $L(1, \chi)$

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Toyoizumi, Masao Remarks on the upper bound for  $L(1, \chi)$ . 91k:11107

Zhang, Wen Peng An elementary result about  $L$ -functions. (Chinese. English summary) 91m:11066

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## 11M26 Nonreal zeros of $\zeta(s)$ and $L(s, \chi)$ ; Riemann and other hypotheses

Armitage, J. V. The Riemann hypothesis and the Hamiltonian of a quantum mechanical system. 91k:11072

Chen, Jing Run (with Wang, Tian Ze) A theorem on exceptional zeros of  $L$ -functions. (Chinese) 91j:11069

— (with Wang, Tian Ze) On the distribution of zeros of Dirichlet  $L$ -functions. (Chinese. English summary) 91k:11109

Csordas, George (with Varga, Richard S.) Necessary and sufficient conditions and the Riemann hypothesis. 91d:11107

Fujii, Akio Uniform distribution of the zeros of the Riemann zeta function and the mean value theorems of Dirichlet  $L$ -functions. II. 91k:11110

— Uniform distribution of the zeros of the Riemann zeta function and the mean value theorems. 91f:11060

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— On the gaps between the consecutive zeros of the Riemann zeta function. 91k:11073

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Jarvis, Tyler J. A dominant negative eigenvalue of a matrix of Redheffer. 91j:11070

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— The  $k$ -functions in multiplicative number theory. I. On complex explicit formulae. 91m:11068a

— The  $k$ -functions in multiplicative number theory. II. Uniform distribution of zeta zeros. 91m:11068b

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Knowles, Ian Asymptotics of an ordinary differential equation and the Riemann hypothesis. 91h:11090

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Scotti, A. A new conjecture for the zeros of the Riemann zeta function. (Italian. English summary) 91f:11062

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Wolke, Dieter Über die zahlentheoretische funktion  $\omega(n)$ . [On the number-theoretic function  $\omega(n)$ ] 91g:11095

Zhang, Wen Peng On the density of zeros of Dirichlet  $L$ -functions. (Chinese. English summary) 91g:11096

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Kudryavtsev, M. V. (with Chudakov, N. G.) Some relations for the zeta function and the sequence of prime numbers. (Russian) 91f:11065

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Louboutin, Stéphane Minorations (sous l'hypothèse de Riemann généralisée) des nombres de classes des corps quadratiques imaginaires. Application. (English summary) [Explicit lower bounds for the class numbers of imaginary quadratic fields (under the generalized Riemann hypothesis). Application] 91e:11126

Mayer, Dieter H. The thermodynamic formalism approach to Selberg's zeta function for  $\mathrm{PSL}(2, \mathbb{Z})$ . 91j:58130

Zhang, Wen Peng A note on a class of mean square values of  $L$ -functions. (Chinese. English summary) 91j:11068

## 11M35 Hurwitz and Lerch zeta functions

Allouche, Jean-Paul (with Shallit, Jeffrey) Sums of digits and the Hurwitz zeta function. 91i:11111

Ishibashi, Makoto An elementary proof of the generalized Eisenstein formula. 91k:11075

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## 11M41 Other Dirichlet series and zeta functions {For local and global ground fields, see 11R42, 11R52, 11S40, 11S45; for algebro-geometric methods, see 14G10; see also 11E45, 11F66, 11F70, 11F72.}

Acot, Alfred Evaluation of multidimensional linear zeta functions. 91d:11108

Casson-Nogués, Pierrette Dirichlet series associated with a polynomial. 91e:11097

Christian, Ulrich Zur Theorie Selberg'scher Zetafunktionen. [On the theory of Selberg zeta functions] 91j:11073

Cogdell, James W. (with Piatetski-Shapiro, Ilya Iosifovitch) The meromorphic continuation of Kloosterman-Selberg zeta functions. 91m:11070

Elizalde, E. (with Romeo, A.) Regularization of general multidimensional Epstein zeta-functions. 91g:11097

Kaczorowski, J. (with Staf, W.) On zeros and sign changes of certain Dirichlet polynomials. 91f:11063

Kahane, Jean-Pierre Produits de Riesz et séries de Dirichlet. [Riesz products and Dirichlet series] 91e:11098

Karatsuba, A. A. On zeros of the Davenport-Heilbronn function lying on the critical line. 91k:11113

Keating, S. F. An infinite family of zeta functions indexed by Hermite polynomials. 91h:11092

Kinchi, Isao Asymptotic behavior of a certain multiplicative function. 91c:11050

Kuznetsov, Valentin Nikolaevich Analytic continuation of a class of Dirichlet series. (Russian) 91d:11109

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Yü, Wen Ch'ing On a Dirichlet series associated with a polynomial. 91m:11071

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Bacry, Henri (with Boon, M.) Hardy-Pollaczek polynomials and  $\Gamma$  and  $\zeta$  functions. 91m:33034

Bartz, K. M. An effective order of Hecke-Landau zeta functions near the line  $\sigma = 1$ . I. 91h:11130

— (with Fryka, Tadeusz) An effective estimate for the density of zeros of Hecke-Landau zeta-functions. 91a:11057

— An effective order of Hecke-Landau zeta functions near the line  $\sigma = 1$ . II. (Some applications). 91h:11131

Blind, Bruno Distributions zêta à plusieurs variables associées aux algèbres de Jordan simples euclidiennes. (English summary) [Zeta distributions in several variables associated with simple Euclidean Jordan algebras] 91k:32034

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Elizalde, E. (with Romeo, A.) An integral involving the generalized zeta function. 91k:33017

— On the zeta-function regularization of a two-dimensional series of Epstein-Hurwitz type. 91a:81137

Everest, G. R. Counting the values taken by sums of  $S$ -units. 91j:11015

Fryka, Tadeusz Über einige Formeln in analytischer Zahlentheorie. I. [On some formulas in analytic number theory. I] 91f:11077

— see also Bartz, K. M., 91a:11057

Harris, Bruno Iterated integrals and Epstein zeta functions with harmonic rational function coefficients. 91g:11047

Meurman, Tom On the order of the Maass  $L$ -function on the critical line. 91m:11037

Müller, Werner  $L^2$ -index theory, eta invariants and values of  $L$ -functions. 91g:58274

Muro, Masakazu On zeta functions associated with the exceptional Lie group of type  $E_6$ . 91d:11053

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[Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur. (8) 35 (1963), 252-257; MR 31 #161]. (Italian summary) 91b:11115

#### Items with secondary classifications in 11M45

- Baladi, Viviane Comment compter avec les fonctions zeta? [How can one count with zeta functions?] 91m:58126  
 Geroldinger, Alfred Ein quantitatives Resultat über Faktorisierungen verschiedener Länge in algebraischen Zahlkörpern. [A quantitative result on factorizations of variable length in algebraic number fields] 91e:11151  
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##### Items with secondary classifications in 11M99

- Moser, Jan Zeros of a random process generated by the Riemann-Siegel formula. (Russian. English and Slovak summaries) 91k:11070  
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#### 11N05 Distribution of primes

- Chudakov, N. G. *see* Kudryavtsev, M. V., 91f:11065  
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 — (with Tenenbaum, Gérard) Diviseurs de Titchmarsh des entiers sans grand facteur premier. [Titchmarsh divisors of integers free of large prime factors] 91h:11122  
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- Coleman, M. D. The distribution of points at which binary quadratic forms are prime. 91j:11077  
 Garrison, Betty Polynomials with large numbers of prime values. 91h:11124

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- Duke, W. Some problems in multidimensional analytic number theory. 91d:11140  
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- Hildebrand, Adolf Some new applications of the large sieve. 91k:11079  
 Liu, Hong Qian On the prime twins problem. 91i:11125  
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- Adhikari, Sukumar Das (with Balasubramanian, Ramachandran) A note on a certain error-term. 91k:11086  
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Thanigaisalam, K. On sums of positive integral powers and simple proof of  $G(6) \leq 31$ . 91h:11102

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— Distribution de points sur une sphère (d'après Lubotzky, Phillips et Sarnak). [Distribution of points on a sphere (after Lubotzky, Phillips and Sarnak)] 91k:11089

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### 11P32 Goldbach-type theorems; other additive questions involving primes

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- Chen, Jing Run (with Wang, Tian Ze) A theorem on exceptional zeros of  $L$ -functions. (Chinese) 91f:11069
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- On the proofs of the Rogers-Ramanujan identities. 91e:11112
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- Robinson, Raphael M. Comment to: "A motivated proof of the Rogers-Ramanujan identities" [Amer. Math. Monthly 96 (1989), no. 5, 401–409; MR 90e:11147] by G. E. Andrews and R. J. Baxter. 91j:11086
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- Bhargava, Srinivasamurthy (with Adiga, Chandrashekar; Somashekhara, D. D.) Parity results deducible from certain theta function identities found in Chapter 16 of Ramanujan's second note-book. 91c:11059
- Bleeksmith, Richard (with Brillhart, John; Gerst, Irving) On a certain (mod 2) identity and a method of proof by expansion. 91j:11087
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 Kolster, Manfred Odd torsion in the tame kernel of totally real number fields. 91m:11102  
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 Nguyễn-Quang-Dỗ, Thốg Une étude cohomologique de la partie 2-primaire de  $K_2^{\mathcal{O}}$ . (English summary) [A cohomological study of the 2-primary part of  $K_2^{\mathcal{O}}$ ] 91h:11130  
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Roquette, P. Galois-Gruppen und Symmetrie. [Galois groups and symmetry] 91k:11157

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## 11S25 Galois cohomology [see also 12Gxx, 16H05]

Koya, Yoshihiro A generalization of class formation by using hypercohomology. 91c:11168

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## 11S31 Class field theory; $p$ -adic formal groups [see also 14L05]

Edemskii, V. A. Decomposition of formal Lubin-Tate modules. 91h:11132

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Morava, Jack Some Weil group representations motivated by algebraic topology. (see 91a:57021)

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Carayol, Henri Nonabelian Lubin-Tate theory. 91c:11169

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Prasad, Dipendra Trilinear forms for representations of  $GL(2)$  and local  $\epsilon$ -factors. 91b:22023

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— On modular representations of  $Gal(\overline{\mathbb{Q}}/\mathbb{Q})$  arising from modular forms. 91g:11066

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Pas, Johan Uniform  $p$ -adic cell decomposition and local zeta functions. 91g:11142

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Kutzko, Philip (with Manderscheid, David) On the supercuspidal representations of  $GL_N$ ,  $N$  the product of two primes. 91b:22025

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#### 11S80 Other analytic theory (analogues of beta and gamma functions, $p$ -adic integration, etc.)

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##### Items with secondary classifications in 11S80

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Lüneburg, Heinz Comments on the paper of D. Blessenohl and K. Johnsen: "Polynomials over finite fields with the same root space" [Arch. Math. (Basel) 48 (1987), no. 2, 116–125; MR 88i:11094]. (German) 91d:11149

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Katz, Nicholas M. Factoring polynomials in finite fields: an application of Lang-Weil to a problem in graph theory. 91d:11150

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 Thiong-Ly, Jean Augustin Note for computing the minimum polynomial of elements in large finite fields. 91g:11163  
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- Berend, Daniel (with Katz, Gabriel) Separating topology and number theory in the Atiyah-Singer  $\eta$ -signature formula. 91k:58122  
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## 11T30 Structure theory

- Bach, Eric A note on square roots in finite fields. 91h:11140  
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Coppersmith, Don (with Winograd, Shmuel) Matrix multiplication via arithmetic progressions. 91f:68058

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Ela, M. (with Neri, Fabio) A note on addition chains and some related conjectures. 91h:11022

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Gianni, Patrizia (with Miller, Victor; Trager, Barry M.) Decomposition of algebras. 91e:12009

Girault, Marc (with Toffin, Philippe; Vallée, Brigitte) Computation of approximate  $L$ th roots modulo  $n$  and application to cryptography. 91d:11156

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Grigor'ev, D. Yu. Complexity of factorization and g.c.d. calculation for linear ordinary differential operators. (Russian. English summary) 91j:12014

Hafner, James Lee (with McCurley, Kevin S.) On the distribution of running times of certain integer factoring algorithms. 91g:11157

Hershberger, John Finding the upper envelope of  $n$  line segments in  $O(n \log n)$  time. 91d:68127

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- Itoh, Toshiya (with Tsujii, Shigeo) Structure of parallel multipliers for a class of fields  $GF(2^m)$ . 91c:68064
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- Kannan, Ravindran The Frobenius problem. 91c:68063
- Khachyan, L. G. The problem of calculating the volume of a polyhedron is enumeratively hard. 91c:68073
- Krupskii, V. N. Efficiency of coding approximations of real numbers. 91c:68063
- Langemyr, Lars (with McCallum, Scott) The computation of polynomial greatest common divisors over an algebraic number field. 91a:11073
- Lawrence, Brooks (with Polge, Robert; Adhams, Reza R.) Multiple radix fast Fourier transformation based on number theoretic transforms. 91m:65339
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- Neaderhouser Purdy, Carla C. (with Purdy, George B.) The area-time complexity of the greatest common divisor problem: a lower bound. 91c:68065
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- Norton, Graham A shift-remainder GCD algorithm. 91d:68053
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- Okamoto, Tatsuaki see Ohta, Kazuo, 91a:94024
- Păun, Gheorghe (with Săntean, Lila) Number-theoretic mappings computed by G.S.M.s. 91b:68047
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- Baxter, Rodney James see Andrews, George E., 91k:11188
- Borwein, Jonathan M. (with Borwein, Peter) Approximating  $\pi$  with Ramanujan's modular equations. 91a:11072
- Borwein, Peter see Borwein, Jonathan M., 91a:11072
- Chalmovich, Mark (with Freiman, Gregory; Galil, Zvi) Solving dense subset-sum problems by using analytical number theory. 91c:11153
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- Olivos, Jorge see Morain, François, 91h:11189
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- Ivić, Aleksandar (with te Riele, H. J. J.) On the zeros of the error term for the mean square of  $|\zeta(\frac{1}{2} + it)|$ . 91e:11095
- Kubina, Jeffrey M. (with Wunderlich, Marvin C.) Extending Waring's conjecture to 471, 600, 000. 91b:11101
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- Postl, Helmut Fast evaluation of Dickson polynomials. 91k:11116
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## 11Y40 Algebraic number theory computations

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- Darmon, Henri (with Ford, David) Computational verification of  $M_{11}$  and  $M_{12}$  as Galois groups over  $\mathbb{Q}$ . 91b:11146
- Díaz y Díaz, F. A table of totally real quintic number fields. 91h:11155
- Dixon, John D. Computing subfields in algebraic number fields. 91h:11156
- Ernvall, R. (with Metsänkylä, T.) Cyclotomic invariants for primes between 125 000 and 150 000. 91h:11157
- Ford, David see Darmon, Henri, 91b:11146
- Hafner, James Lee (with McCurley, Kevin S.) A rigorous subexponential algorithm for computation of class groups. 91b:11090

- Itoh, Toshiya An efficient probabilistic algorithm for solving quadratic equation over finite fields. 91k:11190
- Langemyr, Lars (with McCallum, Scott) The computation of polynomial greatest common divisors over an algebraic number field. 91a:11073
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- McCurley, Kevin S. see Hafner, James Lee, 91b:11090
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- Shortest division chains in imaginary quadratic number fields. 91g:11162
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- Thiong-Ly, Jean Augustin Note for computing the minimum polynomial of elements in large finite fields. 91g:11163
- Vereshchagin, N. K. Algorithms over algebraic numbers. (Russian) (see 91k:00013)
- Yokoyama, Kazuhiro (with Noro, Masayuki; Takeshima, Taku) Computing primitive elements of extension fields. 91b:11147

## Items with secondary classifications in 11Y40

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- Chudnovsky, David V. (with Chudnovsky, G. V.) Computational problems in arithmetic of linear differential equations. Some Diophantine applications. 91b:11083
- Chudnovsky, G. V. see Chudnovsky, David V., 91b:11083
- Williamson, Clifton J. Odd degree polynomials with dihedral Galois groups. 91d:12008

## 11Y50 Computer solution of Diophantine equations

- Chang, Fan Jen see Fang, Chün Hsiung, 91j:11114
- Claassen, Michael (with Fortenbacher, Albrecht) Efficient solution of linear Diophantine equations [MR 90i:11151]. (see 91j:68006)
- Fang, Chün Hsiung (with Chang, Fan Jen) A novel approach for solving Diophantine equations. 91j:11114
- Fortenbacher, Albrecht see Claassen, Michael, (91j:68006)
- Glazunov, N. M. (with Postnikov, A. G.) On the existence of rational points on the curve  $y^2 = f(x)$  over a prime finite field. (Russian) 91i:11191
- Hardy, Kenneth (with Muskat, Joseph B.; Williams, Kenneth S.) A deterministic algorithm for solving  $n = fu^2 + gv^2$  in coprime integers  $u$  and  $v$ . 91d:11164
- Iséki, Kiyoshi (with Lajos, Sándor) Positive integral solutions of the equation  $x^2 + (x+1)^2 + (x+2)^2 + \dots + (x+n)^2 = y^2$  ( $1 \leq x+n \leq 10\,000$ ). 91h:11158
- Lajos, Sándor see Iséki, Kiyoshi, 91h:11158
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- Pottier, Lole Bornes et algorithme de calcul des générateurs des solutions de systèmes diophantiens linéaires. (English summary) [Bounds and algorithm for generators of solutions of linear Diophantine systems] 91j:11115
- Romeuf, Jean-François A polynomial algorithm for solving systems of two linear Diophantine equations. 91k:11115
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- Tzanakis, Nikos On the practical solution of the Thue equation—an outline. 91f:11091
- de Weger, B. M. M. On the practical solution of Thue-Mahler equations, an outline. 91f:11092
- Williams, Kenneth S. see Hardy, Kenneth; et al., 91d:11164

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- Freiman, Gregory Subset-sum problem with different summands. 91b:11023
- Iliopoulos, Costas S. Worst-case complexity bounds on algorithms for computing the canonical structure of finite abelian groups and the Hermite and Smith normal forms of an integer matrix. 91a:20065
- Worst-case complexity bounds on algorithms for computing the canonical structure of infinite abelian groups and solving systems of linear Diophantine equations. 91a:20066
- Kashihara, Kenji The Diophantine equation  $x^2 - 1 = (y^2 - 1)(z^2 - 1)$ . (Japanese. English summary) 91d:11025
- Stephens, A. J. (with Williams, Hugh Cowie) Some computational results on a problem of Eisenstein. 91c:11066
- Sturmfels, Bernd (with White, Neil L.) All  $11_2$  and  $12_2$ -configurations are rational. 91f:51003
- Vizvári, Béla ★ An application of an optimal behaviour of the greedy solution in number theory. 91h:11024
- Wagon, Stan Editor's corner: the Euclidean algorithm strikes again. 91b:11039
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## 11Y55 Calculation of integer sequences

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- Cerbone, G. see Capocelli, Renato M.; et al., 91d:11166
- Cull, Paul see Capocelli, Renato M.; et al., 91d:11166
- Ganikhodzhaev, N. N. (with Islamov, K. A.) Numerical experiments with periodic fractions on the set of prime numbers. (Russian) 91j:11116
- Holloway, J. L. see Capocelli, Renato M.; et al., 91d:11166
- Islamov, K. A. see Ganikhodzhaev, N. N., 91j:11116
- Postl, Helmut Fast evaluation of Dickson polynomials. 91k:11116

## Items with secondary classifications in 11Y55

- Bhavsar, Virendra C. (with Gujar, Uday G.; Horton, Joseph D.; Lambrou, Lambros A.) Evaluation of the discrepancy of the linear congruential pseudo-random number sequences. 91b:65005



Bleuten-Guarnalec, Noëlle On a possible classification of real-time constructed sequences. 91a:68157

Gamba, Z. (with Hernando, J. A.; Romanelli, L.) Are prime numbers regularly ordered? 91b:11012

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Hernando, J. A. see Gamba, Z.; et al., 91b:11012

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Matsuoka, Yoshio A table of the explicit formulas for the sums of powers  $S_p(n) = \sum_{k=1}^n k^p$  for  $p = 62(1)99$ . 91k:11021

— see also Origuchi, Tadashi; et al., 91d:11021 and 91d:11022

Origuchi, Tadashi (with Kiriyama, Hiroshi; Matsuoka, Yoshio) Corrigenda: "A table of the explicit formulas for the sums of powers  $S_p(n) = \sum_{k=1}^n k^p$  for  $p = 1(1)61$ " [Rep. Fac. Sci. Kagoshima Univ. Math. Phys. Chem. No. 20 (1987), 11–31; MR 89e:11016]. 91d:11021

— (with Kiriyama, Hiroshi; Matsuoka, Yoshio) Corrigenda: "A table of the explicit formulas for the sums of powers  $S_p(n) = \sum_{k=1}^n k^p$  for  $p = 1(1)61$ . II" [Rep. Fac. Sci. Kagoshima Univ. Math. Phys. Chem. No. 21 (1988), 49–64; MR 90g:11026]. 91d:11022

Romanelli, L. see Gamba, Z.; et al., 91b:11012

## 11Y60 Evaluation of constants

Bauer, Friedrich Ludwig Eine Bemerkung zu Koechers Reihen für die Eulersche Konstante. [A remark on Koecher's series for Euler's constant] 91k:11117

Briggs, Keith A precise calculation of the Feigenbaum constants. 91j:11117

Koecher, Max Einige Bemerkungen zur Eulerschen Konstanten. [Some remarks on Euler's constant] 91k:11118

Items with secondary classifications in 11Y60

Borwein, Jonathan M. (with Borwein, Peter; Dilcher, K.) Pi, Euler numbers, and asymptotic expansions. 91c:40002

— (with Borwein, Peter) ★ A dictionary of real numbers. 91g:11001

— (with Borwein, Peter) A cubic counterpart of Jacobi's identity and the AGM. 91e:33012

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## 11Y65 Continued fraction calculations

Stephens, A. J. (with Williams, Hugh Cowie) Some computational results on a problem of Eisenstein. 91c:11066

Williams, Hugh Cowie see Stephens, A. J., 91c:11066

Items with secondary classifications in 11Y65

Bodnar, D. I. Two-dimensional corresponding branched continued fractions with partial numerators that are linear with respect to the variables. (Russian. English summary) 91k:65017

## 11Y70 Values of arithmetic functions; tables

Items with secondary classifications in 11Y70

Borwein, Jonathan M. (with Borwein, Peter) ★ A dictionary of real numbers. 91g:11001

Borwein, Peter see Borwein, Jonathan M., 91g:11001

Costello, Patrick Amicable pairs of the form  $(i, 1)$ . 91k:11009

Struik, P. A systematic design of a parallel program for Dirichlet convolution. 91k:68078

## 11Y99 None of the above, but in this section

Items with secondary classifications in 11Y99

Allouche, Jean-Paul (with Flajolet, Philippe; Mendès France, Michel) Algebraically independent formal power series: a language theory interpretation. 91j:11013

Flajolet, Philippe see Allouche, Jean-Paul; et al., 91j:11013

Horinouchi, Sôichi see Sakai, Kouichi, 91b:11002

Kirschenhofer, Peter (with Prodinger, Helmut)  $b$ -tries: a paradigm for the use of number-theoretic methods in the analysis of algorithms. 91m:68023

Mendès France, Michel see Allouche, Jean-Paul; et al., 91j:11013

Prodinger, Helmut see Kirschenhofer, Peter, 91m:68023

Sakai, Kouichi (with Horinouchi, Sôichi) Remarks on automorphic numbers and Kaprekar's numbers. (Japanese. English summary) 91b:11002

## 11Z50 Miscellaneous applications of number theory

Allouche, Jean-Paul On a sequence of rational functions. (French summary) 91g:11164

Arlinghaus, Sandra Lach (with Arlinghaus, William C.) The fractal theory of central place geometry: a Diophantine analysis of fractal generators for arbitrary Löschian numbers. 91d:11167

Arlinghaus, William C. see Arlinghaus, Sandra Lach, 91d:11167

Cheng, Zheming (with Savit, Robert) Structure factor of substitutional sequences. 91m:11114

Godreche, C. Types of order and diffraction spectra for tilings of the line. 91m:11115

Mendès France, Michel The inhomogeneous Ising chain and paperfolding. 91g:11165

Moore, R. R. (with van der Poorten, Alfred J.) On the thermodynamics of curves and other curlicues. 91d:11168

Nishizawa, Kiyoko (with Sekiguchi, Koji; Yoshino, Kunio) Fractal aspects of localization of algebraic integers and complex dynamical systems. 91g:11166

van der Poorten, Alfred J. see Moore, R. R., 91d:11168

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Sekiguchi, Koji see Nishizawa, Kiyoko; et al., 91g:11166

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Items with secondary classifications in 11Z50

Audit, Philippe (with Truong, T. T.) Arithmetical finite-size corrections in one-dimensional quantum systems. 91b:82014

Binov, I. N. A direct method for a finitely smooth problem with "small denominators". 91g:34022

Morton, Patrick (with Mourant, W. J.) Paper folding, digit patterns and groups of arithmetic fractals. 91c:11007

— Connections between binary patterns and paperfolding. 91h:11010

Mourant, W. J. see Morton, Patrick, 91c:11007

Truong, T. T. see Audit, Philippe, 91b:82014

## 12-XX Field theory and polynomials

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Items with secondary classifications in 12-01

(Artin, Emil) see van der Waerden, B. L., 91h:00009a and 91h:00009b

(Blum, Fred) see van der Waerden, B. L., 91h:00009a

Bourbaki, N. ★ Algebra. II. Chapters 4–7. 91h:00003

(Cohn, P. M.) see Bourbaki, N., 91h:00003

(Howie, J.) see Bourbaki, N., 91h:00003

(Janusz, Gerald J.) see McCoy, Neal H., 91a:00006

McCoy, Neal H. ★ Introduction to modern algebra. 91a:00006

(Noether, Emmy) see van der Waerden, B. L., 91h:00009a and 91h:00009b

Rotman, Joseph ★ Galois theory. 91j:12009

(Schalenberger, John R.) see van der Waerden, B. L., 91h:00009a and 91h:00009b

van der Waerden, B. L. ★ Algebra. Vol. I. 91h:00009a

— ★ Algebra. Vol. II. 91h:00009b

Warner, Seth ★ Modern algebra. 91g:00003

### 12-02 Research exposition (monographs, survey articles)

Items with secondary classifications in 12-02

Mazur, B. Heinrich ★ Konstruktive Galoistheorie. (German) [Constructive Galois theory] 91a:12007

### 12-03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 12-03

Alekseeva, N. B. From the history of the theory of finite fields. (Russian. English summary) 91g:01015

Amitsur, S. A. Highlights in the history of finite-dimensional central division algebras. 91g:01024

Bashmakova, I. G. Leonhard Euler's contributions to algebra. (Russian) (see 91e:01026)

(Betti, Enrico) see Mammone, Pasquale, 91j:01026

(Bombelli, Raffaele) see Smirnova, G. S., 91i:01018

(Eisenstein, G.) see Patterson, S. J., 91i:01046

(Euler, Leonhard) see Bashmakova, I. G., (91e:01026)

Mammone, Pasquale Sur l'apport d'Enrico Betti en théorie de Galois. [The contribution of Enrico Betti to Galois theory] 91j:01026

Patterson, S. J. Eisenstein and the quintic equation. (French and German summaries) 91i:01046

Smirnova, G. S. Geometric solution of the cubic equations in Raffaele Bombelli's *Algebra*. (Russian. English summary) 91i:01018

### 12-04 Explicit machine computation and programs (not the theory of computation or programming)

Items with secondary classifications in 12-04

Atogi, O. Michael see Leach, Ronald J.; et al., 91a:65259

Darmon, Henri (with Ford, David) Computational verification of  $M_{11}$  and  $M_{12}$  as Galois groups over  $\mathbb{Q}$ . 91b:11146

Ford, David see Darmon, Henri, 91b:11146

von zur Gathen, Joachim Algebraic complexity theory. 91a:68150

Leach, Ronald J. (with Atogi, O. Michael; Stephen, Razzyah R.) The actual complexity of parallel evaluation of low degree polynomials. 91a:65259

Mignotte, Maurice ★ Mathématiques pour le calcul formel. (French) [Mathematics for computer algebra] 91a:68001

Mikhailiyuk, M. V. Complexity of calculating a polynomial at two opposite points. (Russian) 91a:68151

Noro, Masayuki see Yokoyama, Kazuhiro; et al., 91b:11147

Stephen, Razzyah R. see Leach, Ronald J.; et al., 91a:65259

Stoss, Hans-Jörg On the representation of rational functions of bounded complexity. 91b:68050

— Lower bounds for the complexity of polynomials. 91b:68051

Takeshima, Taku *see* Yokoyama, Kazuhiro; et al., 91b:11147  
 Yokoyama, Kazuhiro (with Noro, Masayuki; Takeshima, Taku) Computing primitive elements of extension fields. 91b:11147

## 12-06 Proceedings, conferences, collections, etc.

(Delon, Françoise) *see* Seminar: Ordered Algebraic Structures, 91e:12001 and 91e:12002  
 (Dickmann, M. A.) *see* Seminar: Ordered Algebraic Structures, 91e:12001 and 91e:12002  
 (Gondard-Cozette, Danielle) *see* Seminar: Ordered Algebraic Structures, 91e:12001 and 91e:12002

Items listed otherwise than by author

Number theory ★ Théorie des nombres. Année 1988/89. Fasc. 2. (French) [Number theory. 1988/89. Part 2] 91b:12001

Seminar:

Ordered Algebraic Structures ★ Séminaire sur les Structures Algébriques Ordonnées. Vol. I. (French) [Seminar on Ordered Algebraic Structures. Vol. I] 91e:12001  
 — ★ Séminaire sur les Structures Algébriques Ordonnées. Vol. II. (French) [Seminar on Ordered Algebraic Structures. Vol. II] 91e:12002

Théorie des nombres ★ Théorie des nombres. Année 1988/89. Fasc. 2. (French) [Number theory. 1988/89. Part 2] 91b:12001

## 12Dxx Real and complex fields

### 12D05 Polynomials: factorization

Barnard, Roger W. Open problems and conjectures in complex analysis. 91j:12001  
 Granville, Andrew Bounding the coefficients of a divisor of a given polynomial. 91g:12001  
 Lombardi, Henri Sous-résultats, suite de Sturm, spécialisation. (English summary) [Subresultants, Sturm sequence, specialization] 91f:12001

### 12D10 Polynomials: location of zeros (algebraic theorems) {For the analytic theory, see 26C10, 30C15.}

Al-Rashed, Abdallah M. (with Zaheer, Neyamat) Certain compositions of abstract polynomials and their pseudo-derivatives. 91d:12001  
 — (with Zaheer, Neyamat) On theorems of Walsh and Laguerre concerning zeros of polynomials. 91h:12001  
 Laksov, Dan (with Westin, Karin) Nullstellensätze; conjectures and counterexamples. 91h:12002  
 Sauber, Beatriz I. When a polynomial has exactly one positive root and no roots in  $(-1, 0)$ . 91e:12002  
 Wang, Shi Qiang Hilbert's Nullstellensatz for an infinite-dimensional complex affine space. (Chinese. English summary) 91h:12001  
 Westin, Karin *see* Laksov, Dan, 91h:12002  
 Yakoubsohn, Jean-Claude On Newton's rule and Sylvester's theorems. 91j:12002  
 Zaheer, Neyamat *see* Al-Rashed, Abdallah M., 91d:12001 and 91h:12001

Items with secondary classifications in 12D10

Abian, Alexander (with Wilson, James A.) A theorem equivalent to the fundamental theorem of algebra. 91c:30009  
 Barmish, B. Ross *see* Wei, Ke Hui, 91d:93057 and Soh, Y. C., 91b:93129  
 Benedetti, Riccardo (with Risler, Jean-Jacques) ★ Real algebraic and semi-algebraic sets. 91j:14045  
 Chojnowski, Fabien (with Gutman, Shaul) Root-clustering criteria. II. Linear matrix equations. 91f:93050  
 — (with Gutman, Shaul) Root-clustering criteria. III. The rational-mapping approach. 91f:93051  
 — *see also* Gutman, Shaul, 91f:93049  
 Dedieu, Jean-Pierre À propos de la méthode de Dandelin-Graeffe. (English summary) [Zeros of polynomials and the Dandelin-Graeffe method] 91f:65094  
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- Chacón, M. (with Wadsworth, Adrian R.) On decomposing  $c$ -valued division rings. 91j:16055
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- Chu, Hua (with Ch'én, Yung Ch'iu) Remarks on transformation formulas for  $p$ -symbols. 91k:12007
- Drakokhrust, Yu. A. On the group  $K_1 \text{Spin}(D)$  for skew fields over Henselian fields. (Russian. English summary) 91c:16006
- On the groups  $SK_1(D)$  and  $K_1 \text{Spin}(D)$  for Henselian division algebras. (Russian. English summary) 91h:19003
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## 12E20 Finite fields (field-theoretic aspects)

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- Allouche, Jean-Paul. Note on an article of H. Sharif and C. F. Woodcock: "Algebraic functions over a field of positive characteristic and Hadamard products" [J. London Math. Soc. (2) 37 (1988), no. 3, 395–403; MR 89f:12005]. (French) 91d:12007
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- Berrizbeitia, Pedro. Additive properties of multiplicative subgroups of finite index in fields. 91e:12003
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- Sato, Shizuka. On modular extensions. 91b:13004

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- Supplement to: "A sharpening of the normal basis theorem" [J. Algebra 103 (1986), no. 1, 141–159; MR 88a:12004] by Blessenohl and K. Johnsen. (German) 91h:12008
- On the stabilizer of a finite group of field automorphisms. 91k:12006
- Cremona, J. E. On the Galois groups of the iterates of  $x^2 + 1$ . 91k:12003
- Crespo, Teresa. Explicit construction of  $\bar{A}_n$  type fields. 91a:12006
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- Matzat, B. Heinrich. Rationality criteria for Galois extensions. 91g:12004
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- Dentzer, Ralf. Projektive symplektische Gruppen  $\mathrm{PSp}_4(p)$  als Galoisgruppen über  $\mathbb{Q}(t)$ . [Projective symplectic groups  $\mathrm{PSp}_4(p)$  as Galois groups over  $\mathbb{Q}(t)$ ] 91h:12005
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- Fried, M. D. Arithmetic of 3 and 4 branch point covers. A bridge provided by noncongruence subgroups of  $\mathrm{SL}_2(\mathbb{Z})$ . 91d:12009
- Haran, Dan. Closed subgroups of  $G(\mathbb{Q})$  with involutions. 91f:12006
- Kotlar, D. (with Schacher, Murray; Sonn, Jack). Central extensions of symmetric groups as Galois groups. 91e:12007
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- Völklein, Helmut.  $\mathrm{PSL}_2(q)$  and extensions of  $\mathbb{Q}(x)$ . 91h:12013

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- Crespo, Teresa. Explicit construction of  $2S_n$  Galois extensions. 91d:11135
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- Malik, D. S. (with Mordeson, John N.). Fuzzy subfields. 91h:12015
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## 12Gxx Homological methods (field theory)

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- Saltman, David J. Multiplicative field invariants and the Brauer group. 91h:12016
- Serre, Jean-Pierre. Spécialisation des éléments de  $\mathrm{Br}_2(\mathbb{Q}(T_1, \dots, T_n))$ . (English summary) [Specialization of the elements of  $\mathrm{Br}_2(\mathbb{Q}(T_1, \dots, T_n))$ ] 91m:12007
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- Risler, Jean-Jacques (with Ronga, Felice) Testing polynomials. 91k:12010
- Ronga, Felice see Risler, Jean-Jacques, 91k:12010
- Roy, Marie-Françoise see Dedieu, Jean-Pierre, 91d:12021
- Ruiz de Velasco y Bellas, Carlos see Gutiérrez, Jaime G., 91g:12012
- Trager, Barry M. see Gianni, Patrizia; et al., 91e:12009
- Items with secondary classifications in 12Y05
- Abraham, S. A. Problems in computer algebra that are connected with a search for polynomial solutions of linear differential and difference equations. 91e:65109
- Buchberger, B. (with Collins, G. E.; Kutzler, B.) Algebraic methods for geometric reasoning. 91g:68156
- Collins, G. E. see Buchberger, B.; et al., 91g:68156
- (Davenport, A.) see Davenport, J. H.; et al., 91j:68061
- Davenport, J. H. (with Siret, Y.; Tournier, E.) ★ Computer algebra. 91j:68061
- Grigor'ev, D. Yu. Complexity of quantifier elimination in the theory of ordinary differential equations. 91m:12009

- (Hearn, Anthony C.) see Davenport, J. H.; et al., 91j:68061
- Kaltofen, Erich (with Trager, Barry M.) Computing with polynomials given by black boxes for their evaluations: greatest common divisors, factorization, separation of numerators and denominators. 91k:68100
- Kutzler, B. see Buchberger, B.; et al., 91g:68156
- Lazard, Daniel (with Rioboo, R.) Integration of rational functions: rational computation of the logarithmic part. 91h:68091
- see also Davenport, J. H.; et al., 91j:68061
- Lombardi, Henri Sous-résultants, suite de Sturm, spécialisation. (English summary) [Subresultants, Sturm sequence, specialization] 91f:12001
- Pankrat'ev, E. V. Computations in differential and difference modules. 91g:12008
- Rioboo, R. see Lazard, Daniel, 91h:68091
- Siret, Y. see Davenport, J. H.; et al., 91j:68061
- Tournier, E. see Davenport, J. H.; et al., 91j:68061
- Trager, Barry M. see Kaltofen, Erich, 91k:68100
- Williamson, Clifton J. Odd degree polynomials with dihedral Galois groups. 91d:12008
- Yakubovich, Jean-Claude On Newton's rule and Sylvester's theorems. 91j:12002
- Zippel, Richard Interpolating polynomials from their values. 91g:68090

## 13-XX Commutative rings and algebras

## 13-01 Instructional exposition (textbooks, tutorial papers, etc.)

- Sharp, R. Y. ★ Steps in commutative algebra. 91j:13001

## Items with secondary classifications in 13-01

- (Artin, Emil) see van der Waerden, B. L., 91h:00009a and 91h:00009b
- (Blum, Fred) see van der Waerden, B. L., 91h:00009a
- Bourbaki, N. ★ Algebra. II. Chapters 4–7. 91h:00003
- (Cohn, P. M.) see Bourbaki, N., 91h:00003
- Eisenreich, Günther ★ Lexikon der Algebra. (German) [Lexicon of algebra] 91h:00005
- (Howie, J.) see Bourbaki, N., 91h:00003
- (Janusz, Gerald J.) see McCoy, Neal H., 91a:00006
- McCoy, Neal H. ★ Introduction to modern algebra. 91a:00006
- (Noether, Emmy) see van der Waerden, B. L., 91h:00009a and 91h:00009b
- (Schulzberger, John R.) see van der Waerden, B. L., 91h:00009a and 91h:00009b
- van der Waerden, B. L. ★ Algebra. Vol. I. 91h:00009a
- ★ Algebra. Vol. II. 91h:00009b
- Warner, Seth ★ Modern algebra. 91g:00003

## 13-03 Historical (must also be assigned at least one classification number from Section 01)

## Items with secondary classifications in 13-03

- Milz, Rainer Wilfried Nöbauer—a life for algebra of polynomials (opening lecture). 91h:01071
- (Nöbauer, Wilfried) see Milz, Rainer, 91h:01071

## 13-04 Explicit machine computation and programs (not the theory of computation or programming)

## Items with secondary classifications in 13-04

- Grigor'ev, D. Yu. The complexity of computations in commutative algebra. 91h:68042

## 13-06 Proceedings, conferences, collections, etc.

- (Bruns, Winfried) see Commutative algebra, 91e:13001
- (Simis, Aron) see Commutative algebra, 91e:13001

## Items listed otherwise than by author

- Commutative algebra ★ Commutative algebra. 91e:13001

## Conference:

- Commutative Algebra ★ Publications du Département de Mathématiques. Nouvelle Série. B. Vol. 3. (French) [Publications of the Department of Mathematics. New Series. B. Vol. 3.] 91a:13001
- Lecture Notes in Mathematics ★ Commutative algebra. 91e:13001
- Lyon ★ Publications du Département de Mathématiques. Nouvelle Série. B. Vol. 3. (French) [Publications of the Department of Mathematics. New Series. B. Vol. 3.] 91a:13001
- Publications du Département de Mathématiques. Nouvelle Série. B ★ Publications du Département de Mathématiques. Nouvelle Série. B. Vol. 3. (French) [Publications of the Department of Mathematics. New Series. B. Vol. 3.] 91a:13001
- Publications of the Department of Mathematics. New Series. B ★ Publications du Département de Mathématiques. Nouvelle Série. B. Vol. 3. (French) [Publications of the Department of Mathematics. New Series. B. Vol. 3.] 91a:13001
- Salvador ★ Commutative algebra. 91e:13001
- Workshop:
- Commutative Algebra ★ Commutative algebra. 91e:13001
- Items with secondary classifications in 13-06
- (Choban, M. M.) see Topological algebra, 91h:00053
- (Mora, Teo) see Effective methods in algebraic geometry, 91m:14003
- (Traverso, Carlo) see Effective methods in algebraic geometry, 91m:14003

Items listed otherwise than by author

- Castiglione, C. ★ Effective methods in algebraic geometry. 91m:14003  
 Effective methods in algebraic geometry ★ Effective methods in algebraic geometry. 91m:14003  
 Progress in Mathematics ★ Effective methods in algebraic geometry. 91m:14003  
 Symposium:  
 Effective Methods in Algebraic Geometry ★ Effective methods in algebraic geometry. 91m:14003  
 Topological algebra ★ Топологическая алгебра. (Russian) [Topological algebra] 91b:00053

## 13Axx General commutative ring theory

### 13A05 Divisibility

- Anderson, D. D. (with Anderson, David F.) Examples of star operations on integral domains. 91d:13001  
 Anderson, David F. see Anderson, D. D., 91d:13001  
 Halter-Koch, Franz Ein Approximationssatz für Halbgruppen mit Divisorentheorie. [An approximation theorem for semigroups with divisor theory] 91m:13001  
 Mott, Joe L. Groups of divisibility: a unifying concept for integral domains and partially ordered groups. (see 91i:06017)  
 Items with secondary classifications in 13A05  
 Böger, Reinhard Multicoreflective subcategories and coprime objects. 91a:18004  
 Facchini, Alberto Divisible modules and space of divisibility of an integral domain. (Italian summary) 91e:13008  
 Gabelli, Stefania On the surjectivity of the map  $T(A) \rightarrow T(A_S)$ . 91c:13007

### 13A10 Radical theory

- Guo, Yuan Chun Restricted weakly primary rings. (Chinese. English summary) 91j:13002  
 Items with secondary classifications in 13A10  
 Ayegnon, Philippe (with Sangare, Daouda) Generalized Samuel numbers and A.P. filtrations. 91f:13001  
 Kang, Byung Gyun A note on ideals which are maximal among nonvaluation ideals. 91f:13003  
 Laksov, Dan (with Westin, Karin) Nullstellensätze; conjectures and counterexamples. 91h:12002  
 Ravi, M. S. Regularity of ideals and their radicals. 91g:13020  
 Saks, A.  $k$ -balanced rings. (Russian. English and Estonian summaries) 91e:13004  
 Sangare, Daouda see Ayegnon, Philippe, 91f:13001  
 Sato, Junro (with Sugatani, Takasi) On the radical ideals of seminormal rings. 91b:13028  
 Sugatani, Takasi see Sato, Junro, 91b:13028  
 Westin, Karin see Laksov, Dan, 91h:12002

### 13A15 Ideals; multiplicative ideal theory

- Al-Ezeh, Hasan Exchange PF-rings and almost PP-rings. 91f:13001  
 Ayegnon, Philippe (with Sangare, Daouda) Generalized Samuel numbers and A.P. filtrations. 91f:13001  
 Erdogdu, Vahap Rings with a principal distributive ideal. (Turkish summary) 91f:13002  
 Jaballah, A. Generating radical monomial ideals. 91m:13002  
 Kang, Byung Gyun A note on ideals which are maximal among nonvaluation ideals. 91f:13003  
 Klucký, Dalibor (with Marková, Libule) Medial sub-Cartesian products of fields. (Russian and Uzbek summaries) 91b:13001  
 Lemmer, Alet (with Naudé, Gert) The prime and maximal ideals in  $R[x]$ ,  $R$  a principal ideal domain. 91k:13001  
 Marková, Libule see Klucký, Dalibor, 91b:13001  
 Mirbagheri, A. (with Ratliff, Louis J., Jr.) Two notes on multiplicatively closed sets of ideals and prime divisors. 91f:13004  
 Mott, Joe L. (with Nashier, Budh; Zafrullah, Muhammad) Contents of polynomials and invertibility. 91e:13002  
 Nashier, Budh see Mott, Joe L., et al., 91e:13002  
 Naudé, Gert see Lemmer, Alet, 91k:13001  
 Okon, J. S. (with Ratliff, Louis J., Jr.) Reductions of filtrations. 91d:13002  
 Ratliff, Louis J., Jr. Certain ideals for which  $I_1 \cdots I_g = I_1 \cap \cdots \cap I_g$ . 91m:13003  
 — see also Okon, J. S., 91d:13002 and Mirbagheri, A., 91f:13004  
 Sangare, Daouda see Ayegnon, Philippe, 91f:13001  
 Zafrullah, Muhammad Well behaved prime  $t$ -ideals. 91i:13002  
 — see also Mott, Joe L., et al., 91e:13002

Items with secondary classifications in 13A15

- Barucci, Valentina On the polynomial ring over a Mori domain. 91g:13027  
 de Boer, Carl (with Ron, Amos) Polynomial ideals and multivariate splines. 91g:41009  
 Costa, Douglas L. Sur la condition de chaînes sur les anneaux. [The chain condition on annihilators] 91g:13022  
 — (with Roitman, Moshe) A lifting approach to  $v$ - and  $t$ -ideals. 91f:13024  
 Gabelli, Stefania On the surjectivity of the map  $T(A) \rightarrow T(A_S)$ . 91c:13007  
 — (with Roitman, Moshe) On Nagata's theorem for the class group. 91i:13015  
 Guo, Yuan Chun Restricted weakly primary rings. (Chinese. English summary) 91j:13002  
 Heinzer, William (with Lantz, David) Integral domains that lose ideals in overrings. 91k:13012  
 Heitmann, Raymond C. (with McAdam, Stephen) Comaximizable primes. 91j:13005  
 Hochster, Melvin (with Huneke, Craig) Tight closure, invariant theory, and the Briançon-Skoda theorem. 91g:13010  
 Huneke, Craig see Hochster, Melvin, 91g:13010  
 Lantz, David see Heinzer, William, 91k:13012

- Matsuda, Ryūki A note on  $N$ -rings. 91j:13004  
 McAdam, Stephen (with Ratliff, Louis J., Jr.; Sally, Judith D.) Integrally closed projectively equivalent ideals. 91b:13007  
 — see also Heitmann, Raymond C., 91j:13005  
 Nishitani, Ikuro Remarks on real Hilbert rings. 91g:13026  
 Ratliff, Louis J., Jr. Notes on projectively related ideals and residual division. 91e:13003  
 — see also McAdam, Stephen, et al., 91b:13007  
 Roitman, Moshe see Gabelli, Stefania, 91i:13015 and Costa, Douglas L., 91i:13024  
 Ron, Amos see de Boer, Carl, 91g:41009  
 Sally, Judith D. see McAdam, Stephen, et al., 91b:13007  
 Visweswaran, S. Intermediate rings between  $D + I$  and  $K[y_1, \dots, y_n]$ . 91d:13010  
 Zafrullah, Muhammad Flatness and invertibility of an ideal. 91f:13014

### 13A18 Valuations and their generalizations

- Alajbegović, Jusuf H. (with Osmanagić, Enver) Essential valuations of Krull rings with zero divisors. 91f:13003  
 Barzani, Silvana Archimedean ideals of valuation domains. 91f:13005  
 Harrison, D. K. (with Vitulli, M. A.) Complex-valued places and CMC subsets of a field. 91b:13003  
 — (with Vitulli, M. A.)  $V$ -valuations of a commutative ring. I. 91b:13002  
 Kontolatos, A. (with Stabakis, J.) Extension of a valuatative order ranging over a p. o. abelian group. 91d:13003  
 Osmanagić, Enver see Alajbegović, Jusuf H., 91f:13003  
 Salce, Luigi On a generalization of a Prüfer-Kaplansky-Procházka theorem. 91d:13004  
 Stabakis, J. see Kontolatos, A., 91d:13003  
 Valente, K. G. On orderings, valuations and 0-primes of a commutative ring. 91d:13005  
 — (with Vitulli, M. A.) Complex-valued preplaces and the nonring CMC subsets of a ring. 91b:13001  
 Vitulli, M. A. see Harrison, D. K., 91b:13002; 91b:13003 and Valente, K. G., 91b:13001

Items with secondary classifications in 13A18

- Fuchs, László<sup>1</sup> (with Salce, Luigi) Equivalent categories of divisible modules. 91b:13012  
 — On the pure global dimension of valuation domains. 91f:13021  
 Hadwin, Don (with Kerr, Jeanne Wald) Scalar-reflexive rings. II. 91b:13013  
 Halter-Koch, Franz Ein Approximationssatz für Halbgruppen mit Divisorentheorie. [An approximation theorem for semigroups with divisor theory] 91m:13001  
 Kerr, Jeanne Wald see Hadwin, Don, 91b:13013  
 Lucas, Thomas G. Valuation rings and integral closure. 91f:13006  
 Moraria, W. Maximally complete immediate extensions. 91i:13007  
 Salce, Luigi (with Zanardo, Paolo) A result by Kulikov that does not extend to modules over general valuation domains. 91f:13013  
 — see also Fuchs, László<sup>1</sup>, 91b:13012  
 Valente, K. G. A note on valuations,  $p$ -primes and the holomorphy subring of a commutative ring. 91f:13019  
 Vámos, Peter Decomposition problems for modules over valuation domains. 91g:13011  
 Zanardo, Paolo Unitary independence in the study of finitely generated and of finite rank torsion-free modules over a valuation domain. 91h:13006  
 — On  $v$ -closed Manis valuation rings. 91f:13024  
 — The Krull-Schmidt theorem for categories of finitely generated modules over valuation domains. 91i:13012  
 — see also Salce, Luigi, 91f:13013

### 13A20 Brauer groups [see also 12Gxx, 16H05]

- Caenepeel, Stefan A cohomological interpretation of the Brauer-Wall group. 91h:13003  
 — A note on Brauer-Long groups and  $Z$ -gradings. 91h:13002  
 Knus, M.-A. (with Parimala, Raman; Srinivas, V.) Azumaya algebras with involutions. 91d:13006  
 Parimala, Raman see Knus, M.-A., et al., 91d:13006  
 Srinivas, V. see Knus, M.-A., et al., 91d:13006  
 Van den Bergh, Michel The Brauer-Severi scheme of the trace ring of generic matrices. 91g:13001

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- Beattie, Margaret see Caenepeel, Stefan, 91h:13003  
 Bogomolov, F. A. (with Landiya, A. N.) 2-cocycles and Azumaya algebras under birational transformations of algebraic schemes. 91j:14011  
 Caenepeel, Stefan (with Beattie, Margaret) A cohomological approach to the Brauer-Long group and the groups of Galois extensions and strongly graded rings. 91h:16030  
 Childs, Lindsay N. Azumaya algebras which are not smash products. 91d:16024  
 DeMeyer, Frank The Brauer Long group of  $Z/2$  dimodule algebras. 91b:16037  
 Ford, Timothy J. On the Brauer group and the cup product map. 91c:14024  
 Halle, Darrell On Clifford algebras, conjugate splittings, and function fields of curves. 91c:11065  
 Landiya, A. N.  $P^*$ -bundles on projective models of quotient spaces. (Russian. English and Georgian summaries) 91f:14046  
 — see also Bogomolov, F. A., 91j:14011  
 Serre, Jean-Pierre Spécialisation des éléments de  $Br_2(Q(T_1, \dots, T_n))$ . (English summary) [Specialization of the elements of  $Br_2(Q(T_1, \dots, T_n))$ ] 91m:12007  
 Tilburghe, F. The Brauer group of  $R$ -algebras which have compatible  $G$ -action and  $Z \times G$ -grading. 91m:16037

### 13A30 Associated graded rings of ideals (Rees ring, form ring) and related topics

- Herzog, Jürgen A homological approach to symbolic powers. 91h:13002  
 Okon, J. S. (with Ratliff, Louis J., Jr.) Filtrations, prime divisors, and Rees rings. 91m:13004  
 Portelli, Dario (with Spangher, Walter) Rees algebras and Gröbner bases. 91d:13007

- Ratliff, Louis J., Jr. Notes on projectively related ideals and residual division. 91j:13003  
 — see also Okon, J. S., 91m:13004  
 Simis, Aron Topics in Rees algebras of special ideals. 91j:13003  
 Spangher, Walter see Portelli, Dario, 91d:13007

#### Items with secondary classifications in 13A30

- Andrade, J. F. (with Simis, Aron) Free resolutions of certain codimension three perfect radical ideals. 91c:13008  
 Herrmann, Manfred (with Moonen, B.; Villamayor Hijo, Orlando Eugenio) Ideals of linear type and some variants. 91b:13010  
 Kanemitsu, Mitsuo (with Yoshida, Ken-ichi) On embedded primary components. 91b:13014  
 Moonen, B. see Herrmann, Manfred; et al., 91b:13010  
 Okon, J. S. (with Ratliff, Louis J., Jr.) Reductions of filtrations. 91d:13002  
 Ramella, Isabella When is the associated graded ring, of a one-dimensional Gorenstein ring, Gorenstein? 91b:13018  
 Ratliff, Louis J., Jr. see Okon, J. S., 91d:13002  
 Roberts, Paul Calvin An infinitely generated symbolic blow-up in a power series ring and a new counterexample to Hilbert's fourteenth problem. 91j:13006  
 Shah, Kishor Coefficient ideals. 91m:13008  
 Simis, Aron see Andrade, J. F., 91c:13008  
 Villamayor Hijo, Orlando Eugenio see Herrmann, Manfred; et al., 91b:13010  
 Yoshida, Ken-ichi see Kanemitsu, Mitsuo, 91b:13014

#### 13A50 Invariant theory [see also 14D25]

- Broer, Bram On the generating functions associated to a system of binary forms. 91d:13008  
 Gordeev, N. L. Qualitative invariant theory of finite groups. (Russian) 91f:13006  
 Hochster, Melvin The canonical module of a ring of invariants. 91c:13001

#### Items with secondary classifications in 13A50

- Gordeev, N. L. Coranks of elements of linear groups and the complexity of algebras of invariants. 91h:20063  
 Hochster, Melvin (with Huneke, Craig) Tight closure and strong  $F$ -regularity. 91b:13025  
 — (with Huneke, Craig) Tight closure, invariant theory, and the Briançon-Skoda theorem. 91g:13010  
 Huneke, Craig see Hochster, Melvin, 91g:13010 and 91b:13025

#### 13A99 None of the above, but in this section

- Liu, Wang Jin Fuzzy prime ideals and fuzzy radical ideals. 91d:13009  
 Malik, D. S. (with Mordeson, John N.) Fuzzy primary representations of fuzzy ideals. 91h:13004  
 Mordeson, John N. see Malik, D. S., 91h:13004  
 Saks, A.  $k$ -balanced rings. (Russian. English and Estonian summaries) 91c:13004

#### Items with secondary classifications in 13A99

- Sitarczyk, Czesław Idempotent polynomials over rings. 91d:13013

#### 13Bxx Ring extensions and related topics

##### 13B02 Extension theory

- Hamann, Eloise Krull dimension and transcendence degree. 91g:13002  
 Matsuda, Ryūki A note on  $N$ -rings. 91j:13004  
 Sato, Shizuka On modular extensions. 91b:13004  
 Visweswaran, S. Intermediate rings between  $D + I$  and  $K[y_1, \dots, y_t]$ . 91d:13010

#### Items with secondary classifications in 13B02

- Huckaba, James A. (with Papick, Ira J.) A note on a class of extensions. 91c:13013  
 Johnston, Bernard Birational extensions of regular local rings and local UFDs. 91b:13018  
 Kikumasa, Isao (with Nagahara, Takasi; Kishimoto, Kazuo<sup>1</sup>) On primitive elements of Galois extensions of commutative semi-local rings. 91c:13005  
 — On primitive elements of Galois extensions of commutative semi-local rings. II. 91c:13006  
 Kishimoto, Kazuo<sup>1</sup> see Kikumasa, Isao; et al., 91c:13005  
 Nagahara, Takasi see Kikumasa, Isao; et al., 91c:13005  
 Papick, Ira J. see Huckaba, James A., 91c:13013

##### 13B05 Galois theory (commutative rings)

- Childs, Lindsay N. On Hopf Galois extensions of fields and number rings. 91b:13004  
 Desrochers, M. C. (with Raphael, R. M.) Galois theory and algebraic extensions of commutative semiprime rings. 91d:13011  
 Greither, Cornelius Generic cyclic extensions of prime power degree. 91f:13007  
 Kikumasa, Isao (with Nagahara, Takasi; Kishimoto, Kazuo<sup>1</sup>) On primitive elements of Galois extensions of commutative semi-local rings. 91c:13005  
 — On primitive elements of Galois extensions of commutative semi-local rings. II. 91c:13006  
 Kimura, Tetsuzo (with Niitsuma, Hiroshi) A note on  $p$ -basis of a polynomial ring in two variables. 91c:13002  
 Kishimoto, Kazuo<sup>1</sup> see Kikumasa, Isao; et al., 91c:13005  
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 Niitsuma, Hiroshi see Kimura, Tetsuzo, 91a:13002  
 Raphael, R. M. see Desrochers, M. C., 91d:13011  
 Ulrich, Karl-H. Cubic Galois extensions of commutative rings. 91b:13005

#### Items with secondary classifications in 13B05

- Caenepeel, Stefan A note on Brauer-Long groups and  $\mathbb{Z}$ -gradings. 91h:13002

- Greither, Cornelius Cyclic Galois extensions and normal bases. 91j:11093  
 Ma, Lin Jun see Sato, George, 91d:16027  
 Nakajima, Atsushi A note on Hopf Galois extensions. (see 91m:16003)  
 Sato, George (with Ma, Lin Jun) On abelian separable extensions and Galois sets of rings. (Serbo-Croatian summary) 91d:16027  
 Tilborghs, F. The Brauer group of  $R$ -algebras which have compatible  $G$ -action and  $\mathbb{Z} \times G$ -grading. 91m:16037

#### 13B10 Morphisms and derivations

- Bass, Hyman Conjecture jacobienne et opérateurs différentiels. [The Jacobian conjecture and differential operators] 91c:13002  
 Becker, Thomas Stability and Buchberger criterion for standard bases in power series rings. 91b:13005  
 Connell, Edwin (with Zweibel, John) Subgroups of polynomial automorphisms. 91a:13003  
 Crupi, Marianna Jacobian conditions in rings that do not contain fields. (Italian. English summary) 91g:13003  
 Dobbs, David E. Nearly integral homomorphisms of commutative rings. 91f:13008  
 Ishibashi, Yasunori see Nakai, Yoshikazu, 91m:00023  
 Itoh, Shiroh Cyclic Galois extensions of regular local rings. 91b:13005  
 Nakai, Yoshikazu (with Ishibashi, Yasunori) Extensions of high order derivations. (see 91m:00023)  
 Stein, Josef The total reducibility order of a polynomial in two variables. 91d:13012a  
 — Linear differential operators related to the Jacobian conjecture have a closed image. 91d:13012b  
 Wong, Philip P. W. Note on an elementary proof of a theorem of Nakai and Baba on the Jacobian conjecture in two variables. 91g:13004  
 Zweibel, John see Connell, Edwin, 91a:13003

#### Items with secondary classifications in 13B10

- Adjamagbo, Kossivi (with van den Essen, Arno) A resultant criterion and formula for the inversion of a polynomial map in two variables. 91g:14011  
 Allshoff, T. M. Uniformization of plane curves and the two-dimensional Jacobian conjecture. (Russian. English and Georgian summaries) 91f:14013  
 Chądzyński, Jacek see Charzyński, Zygmunt; et al., 91b:14019  
 Charzyński, Zygmunt (with Chądzyński, Jacek; Skibiński, Przemysław) A contribution to Keller's Jacobian conjecture. III. (Polish summary) 91h:14019  
 van den Dries, L. P. D. see McKenna, Ken, 91b:12012  
 van den Essen, Arno A criterion to decide if a polynomial map is invertible and to compute the inverse. 91c:13023  
 — see also Adjamagbo, Kossivi, 91g:14011  
 Heitmann, Raymond C. On the Jacobian conjecture. 91c:14018  
 Makar-Limanov, Leonid On groups of automorphisms of a class of surfaces. 91b:14059  
 McKay, James H. (with Wang, Stuart Sui Sheng) A note on the Jacobian condition and two points at infinity. 91d:14005  
 McKenna, Ken (with van den Dries, L. P. D.) Surjective polynomial maps, and a remark on the Jacobian problem. 91b:12012  
 Sato, Shizuka On modular extensions. 91b:13004  
 Shastri, Anant R. A discriminant criterion for the two-dimensional Jacobian problem. 91g:14012  
 Skibiński, Przemysław see Charzyński, Zygmunt; et al., 91b:14019  
 Wang, Stuart Sui Sheng see McKay, James H., 91d:14005

#### 13B15 Ramification theory

- Baba, Kiyoshi Ramification in integral extensions. 91c:13003  
 Langmann, Klaus Offenheit des normalen Ortes. [Openness of the normal locus] 91c:13007  
 Items with secondary classifications in 13B15  
 Kuan, Wei-Eihn (with Rothaus, Christel) On unramifying transcendence base. 91b:13033  
 Rothaus, Christel see Kuan, Wei-Eihn, 91b:13033

#### 13B20 Integral dependence; integral closure; integrally closed rings, related rings (Japanese, etc.) (1985)

#### Items with secondary classifications in 13B20

- Ernst, K. D. Integral closure of a finite ring. (Russian) (see 91b:00031)  
 Picavet, Gabriel Pureté, rigidité, et morphismes entiers. (English summary) [Purity, rigidity, and integral morphisms] 91c:14021

#### 13B21 Integral dependence

#### Items with secondary classifications in 13B21

- Dobbs, David E. Nearly integral homomorphisms of commutative rings. 91f:13008  
 Visweswaran, S. A note on universally zero-divisor rings. 91m:13010

#### 13B22 Integral closure; integrally closed rings, related rings (Japanese, etc.)

- Dobbs, David E. (with Fontana, Marco) Some results on the weak normalization of an integral domain. 91g:13005  
 Fontana, Marco see Dobbs, David E., 91g:13005  
 Heitmann, Raymond C. (with McAdam, Stephen) Comaximizable primes. 91j:13005  
 Lucas, Thomas G. Characterizing when  $R[X]$  is integrally closed. II. 91b:13006  
 — Valuation rings and integral closure. 91b:13006  
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- Estrada, Mario Some remarks on Artin's approximation property in the nonlocal case and excellent Henselian rings. **91j:13016**
- Hübli, Reinhold A note on the torsion of differential forms. **91b:13017**
- Nishimura, Jun-ichi (with Nishimura, Toshio<sup>1</sup>) Ideal-adic completion of Noetherian rings. II. **91h:13014**
- Nishimura, Toshio<sup>1</sup> *see* Nishimura, Jun-ichi, **91h:13014**
- Tabak, Mohamed Sur l'homologie d'André-Quillen. (English summary) [On the André-Quillen homology] **91d:13022**

## 13F45 Seminormal rings

- Sato, Junro (with Sugatani, Takasi) On the radical ideals of seminormal rings. **91h:13028**
- Sugatani, Takasi *see* Sato, Junro, **91h:13028**

## 13F50 Rings with straightening laws, Hodge algebras

- Bruns, Winfried Straightening laws on modules and their symmetric algebras. **91k:13011**
- Watanabe, Keiichi Study of algebras with straightening laws of dimension 2. (*see* **91m:00023**)

## Items with secondary classifications in 13F50

- Abhyankar, Shreeram S. (with Joshi, Sanjeevani B.) Generalized codeletion and standard multitableaux. **91c:05196**
- (with Kulkarni, Devadatta M.) Bijection between indexed monomials and standard bitableaux. **91c:05195**
- Eagon, John A. Partially split double complexes with an associated Wall complex and applications to ideals generated by monomials. **91j:13011**
- Fedder, Richard (with Watanabe, Keiichi) A characterization of  $F$ -regularity in terms of  $F$ -purity. **91k:13009**
- Joshi, Sanjeevani B. *see* Abhyankar, Shreeram S., **91c:05196**
- Kempf, George R. Some wonderful rings in algebraic geometry. **91h:13015**
- Kulkarni, Devadatta M. *see* Abhyankar, Shreeram S., **91c:05195**
- Simis, Aron Topics in Rees algebras of special ideals. **91j:13003**
- Watanabe, Keiichi *see* Fedder, Richard, **91k:13009**

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- Bazzoni, Silvana (with Salce, Luigi) On nonstandard uniserial modules over valuation domains and their quotients. **91a:13012**
- Salce, Luigi *see* Bazzoni, Silvana, **91a:13012**

## 13G05 Integral domains

- Akiba, Tomoharu Remarks on flat and relatively seminormal pairs. **91c:13016**
- Anderson, D. D. (with Anderson, David F.; Costa, Douglas L.; Dobbs, David E.; Mott, Joe L.; Zafrullah, Muhammad) Some characterizations of  $v$ -domains and related properties. **91e:13017**
- Anderson, David F. The Picard group of a monoid domain. II. **91h:13023**
- *see also* Anderson, D. D.; et al., **91e:13017**
- Barucci, Valentina On the polynomial ring over a Mori domain. **91g:13027**
- Costa, Douglas L. (with Roitman, Moshe) A lifting approach to  $v$ - and  $t$ -ideals. **91h:13024**
- *see also* Anderson, D. D.; et al., **91e:13017**
- Dobbs, David E. (with Fontana, Marco; Kabbaj, Salah) Direct limits of Jaffard domains and  $S$ -domains. **91m:13012**
- *see also* Anderson, D. D.; et al., **91e:13017**
- Fontana, Marco *see* Dobbs, David E.; et al., **91m:13012**
- Heinzer, William (with Lantz, David) Integral domains that lose ideals in overrings. **91h:13012**
- Kabbaj, Salah *see* Dobbs, David E.; et al., **91m:13012**
- Lantz, David *see* Heinzer, William, **91h:13012**
- Mott, Joe L. *see* Anderson, D. D.; et al., **91e:13017**
- Nour-Eldine, D. Les idéaux transformés et l'anneau  $R^t$ . [Ideal transforms and the ring  $R^t$ ] **91h:13029**
- Roitman, Moshe *see* Costa, Douglas L., **91h:13024**
- Zafrullah, Muhammad *see* Anderson, D. D.; et al., **91e:13017**

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- Anderson, D. D. (with Anderson, David F.) Examples of star operations on integral domains. **91d:13001**
- Anderson, David F. *see* Anderson, D. D., **91d:13001**

Bouvier, Alain (with Zafrullah, Muhammad) On some class groups of an integral domain. **91g:13015**

Cohen, Paul-Jean Dimension de l'anneau des polynômes à valeurs entières. (English summary) [Dimension of an integer-valued polynomial ring] **91e:13010**

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Gilmer, Robert (with Martin, Mary B.) On the Picard group of a class of nonseminormal domains. **91g:13017**

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— Une conjecture sur les anneaux de Nagata. [A conjecture concerning Nagata rings] **91d:13018**

— *see also* Fontana, Marco, **91e:13011**

Kovács, Béla Integral domains with canonical number systems. **91d:11137**

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— On polynomial extensions of Mori domains over countable fields. **91h:13021**

— On the complete integral closure of a Mori domain. **91k:13003**

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Zafrullah, Muhammad Flatness and invertibility of an ideal. **91f:13014**

— Well behaved prime  $t$ -ideals. **91h:13002**

— *see also* Bouvier, Alain, **91g:13015**

## 13Hxx Local rings and semilocal rings

Strooker, Jan R. ★ Homological questions in local algebra. **91m:13013**

## 13H05 Regular local rings

- El Khatib, Ahmad Sur la  $V$ -dimension des anneaux noethériens. [The  $V$ -dimension of Noetherian rings] **91c:13017**
- Johnston, Bernard Birational extensions of regular local rings and local UFDs. **91e:13018**
- Ma, In-Suk Some remarks on Noetherian local rings. **91h:13030**
- Niituma, Hiroshi  $p$ -basis and quasi-coefficient field of a regular local ring of characteristic  $p$ . **91d:13024**
- Verma, J. K. Joint reductions of complete ideals. **91c:13018**

## Items with secondary classifications in 13H05

- Gallardo Pastor, Carlos The Poincaré series of a divisorial valuation over a two-dimensional regular local ring. (Spanish. English summary) **91e:13016**
- Hwang, Kap Seung Some remarks of the depths and flatness. **91d:13017**
- Itoh, Shiroh Cyclic Galois extensions of regular local rings. **91h:13005**
- Popescu, Dorin Letter to the editor: "General Néron desingularization and approximation" [Nagoya Math. J. **104** (1986), 85–115; MR **88a:14007**]. **91e:14003**
- Roberts, Paul Calvin An infinitely generated symbolic blow-up in a power series ring and a new counterexample to Hilbert's fourteenth problem. **91j:13006**

## 13H10 Special types (Cohen-Macaulay, Gorenstein, Buchsbaum, etc.) [see also 14M05]

- Barucci, Valentina *see* Dobbs, David E.; et al., **91g:13028**
- Dobbs, David E. (with Barucci, Valentina; Fontana, Marco) Gorenstein conductive domains. **91g:13028**
- Fontana, Marco *see* Dobbs, David E.; et al., **91g:13028**
- Hochster, Melvin (with Huneke, Craig) Tight closure and strong  $F$ -regularity. **91h:13025**
- (with Huneke, Craig) Absolute integral closures are big Cohen-Macaulay algebras in characteristic  $p$ . **91h:13017**
- Huneke, Craig *see* Hochster, Melvin, **91h:13017** and **91h:13025**
- Kim, Dae-Sig Some remarks on modules of generalized fractions and Gorenstein rings. **91h:13026**
- Nishida, Kohji On rings of finite Buchsbaum-representation type. (*see* **91m:16003**)
- Nonregular local rings of finite Buchsbaum-representation type. **91e:13019**
- Orecchia, Ferruccio (with Ramella, Isabella) The conductor of one-dimensional Gorenstein rings in their blowing-up. **91g:13029**
- Pan, Jiang Min The Geramita-Orecchia conjecture. (Chinese) **91m:13014**
- Popescu, Dorin Indecomposable Cohen-Macaulay modules and their multiplicities. **91c:13019**
- Ramella, Isabella When is the associated graded ring, of a one-dimensional Gorenstein ring, Gorenstein? **91h:13018**
- *see also* Orecchia, Ferruccio, **91g:13029**
- Song, Yeong-Moo Gorenstein rings and complete intersections. **91e:13020**
- Valtonen, Erik On a question of Roos on  $\lambda$ -dimension. **91j:13014**
- Villarreal, Rafael H. Cohen-Macaulay graphs. **91h:13031**

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- Alonso Tarrío, Leovigildo ★ Esquemas nórdicos y la semicontinuidad de los defectos de intersección completa. (Spanish) [Nordic schemes and semicontinuity of complete-intersection defects] **91g:13014**
- Andrade, J. F. (with Simis, Aron) Free resolutions of certain codimension three perfect radical ideals. **91c:13008**
- Auslander, Maurice (with Buchweitz, Ragnar-Olaf) The homological theory of maximal Cohen-Macaulay approximations. (French summary) **91h:13010**



- Brown, William C. (with Curtis, Frank) Numerical semigroups of maximal and almost maximal length. 91m:13005
- Bruns, Winfried (with Kustin, Andrew R.; Miller, Matthew) The resolution of the generic residual intersection of a complete intersection. 91c:13009
- (with Simis, Aron; Ngô Việt Trung) Blow-up of straightening-closed ideals in ordinal Hodge algebras. 91k:13004
- Buchweitz, Ragnar-Olaf see Auslander, Maurice, 91b:13010
- Cavaliere, Maria Pia (with Rossi, Maria Evelina; Valla, Giuseppe) On short graded algebras. 91g:13030
- Curtis, Frank see Brown, William C., 91m:13005
- Duncan, Andrew J. Infinite coverings of ideals by cosets with applications to regular sequences and balanced big Cohen-Macaulay modules. 91g:13012
- Fedder, Richard (with Watanabe, Keiichi) A characterization of  $F$ -regularity in terms of  $F$ -purity. 91k:13009
- Goto, Shiro (with Herrmann, Manfred; Nishida, Kohji; Villamayor Hijo, Orlando Eugenio) On the structure of Noetherian symbolic Rees algebras. 91a:13006
- Göttes, Klaus Zum Torsionsproblem bei Kurvensingularitäten. [On the torsion problem for curve singularities] 91f:14019
- Handelman, D. E. Effectiveness of an affine invariant for indecomposable integral polytopes. 91f:52015
- Herrmann, Manfred (with Ikeda, Shin) Three notes on the order of ideals defining hypersurfaces. 91f:13026
- see also Goto, Shiro; et al., 91a:13006
- Hibi, Takayuki A numerical characterization of Gorenstein complexes. 91b:13020
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- Huneke, Craig (with Ulrich, Bernd) Generic residual intersections. 91h:13013
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- Ikeda, Shin see Ngô Việt Trung, 91a:13009 and Herrmann, Manfred, 91f:13026
- Itoh, Shiroh Cyclic Galois extensions of regular local rings. 91b:13005
- Kumar, Ravinder<sup>2</sup> A note on the coefficients of Hilbert polynomial. 91m:13015
- Kustin, Andrew R. see Bruns, Winfried; et al., 91c:13009
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- Lorenzini, Anna Betti numbers of points in projective space. 91e:14045
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- Orecchia, Ferruccio (with Ramella, Isabella) The conductor of one-dimensional Gorenstein rings in their blowing-up. 91b:13019
- Popescu, Dorin (with Roczen, Marko) Indecomposable Cohen-Macaulay modules and irreducible maps. 91f:13008
- Ramella, Isabella see Orecchia, Ferruccio, 91b:13019
- Roczen, Marko see Popescu, Dorin, 91f:13008
- Rossi, Maria Evelina see Cavaliere, Maria Pia; et al., 91g:13030
- Simis, Aron Topics in Rees algebras of special ideals. 91f:13003
- see also Andrade, J. F., 91c:13008 and Bruns, Winfried; et al., 91k:13004
- Smith, Dean E. On the Cohen-Macaulay property in commutative algebra and simplicial topology. 91f:52020
- Tomari, Masataka (with Watanabe, Keiichi) Filtered rings, filtered blowing-ups and normal two-dimensional singularities with "star-shaped" resolution. 91a:14010
- Ulrich, Bernd see Huneke, Craig, 91h:13013
- Valla, Giuseppe see Cavaliere, Maria Pia; et al., 91g:13030
- Verma, J. K. Rees algebras with minimal multiplicity. 91b:13032
- Joint reductions of complete ideals. 91c:13018
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- Vogt, Axel A propos des points de Gorenstein d'un morphisme. [On the Gorenstein points of a morphism] 91m:14020
- Watanabe, Keiichi see Tomari, Masataka, 91a:14010 and Fedder, Richard, 91k:13009
- Yuzvinsky, Sergey Cohen-Macaulay seminormalizations of unions of linear subspaces. 91g:14046

### 13H15 Multiplicity theory and related topics

- Cavaliere, Maria Pia (with Rossi, Maria Evelina; Valla, Giuseppe) On short graded algebras. 91g:13030
- Herrmann, Manfred (with Ikeda, Shin) Three notes on the order of ideals defining hypersurfaces. 91f:13026
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- Choi, Sangki Betti numbers and the integral closure of ideals. 91m:13007
- Dutta, S. P. Ext and Frobenius. 91g:13018
- Elias, Juan Characterization of the Hilbert-Samuel polynomials of curve singularities. 91b:13016
- Herrmann, Manfred (with Moonen, B.; Villamayor Hijo, Orlando Eugenio) Ideals of linear type and some variants. 91b:13010
- Lequain, Yves Embedding dimension in local rings. 91b:13012

- Lescot, Jack Séries de Poincaré et modules inertes. [Poincaré series and inert modules] 91k:13010
- Maroscia, Paolo (with Nagel, Uwe; Vogel, Wolfgang) On the minimal free resolutions of finite sets of points in  $\mathbb{P}^n$ . 91c:14059
- Moonen, B. see Herrmann, Manfred; et al., 91b:13010
- Nagel, Uwe see Maroscia, Paolo; et al., 91c:14059
- Orecchia, Ferruccio (with Ramella, Isabella) The conductor of one-dimensional Gorenstein rings in their blowing-up. 91g:13029
- Popescu, Dorin Indecomposable Cohen-Macaulay modules and the Brauer-Thrall conjectures. 91g:13013
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- Shah, Kishor Coefficient ideals. 91m:13008
- Villamayor Hijo, Orlando Eugenio see Herrmann, Manfred; et al., 91b:13010
- Vogel, Wolfgang see Maroscia, Paolo; et al., 91c:14059

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- Cheng, Fu Chang (with Xu, Jin Zhong; Yi, Zhong) Semilocal rings and modules. 91c:13020
- Xu, Jin Zhong see Cheng, Fu Chang; et al., 91c:13020
- Yi, Zhong see Cheng, Fu Chang; et al., 91c:13020

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- Avramov, Luchezar L. (with Foxby, Hans-Björn; Lescot, Jack) Séries de Bass des homomorphismes locaux de Tor-dimension finie. [English summary] [Bass series of local ring homomorphisms of finite flat dimension] 91b:13016
- Campillo López, Antonio (with Ruiz, Jesús M.) Some remarks on Pythagorean real curve germs. 91b:14072
- Foxby, Hans-Björn see Avramov, Luchezar L.; et al., 91b:13016
- Lescot, Jack see Avramov, Luchezar L.; et al., 91b:13016
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- Sharp, R. Y. A method for the study of Artinian modules, with an application to asymptotic behavior. 91a:13011

### 13Jxx Topological rings and modules [see also 16W60, 16W80]

#### Items with secondary classifications in 13Jxx

- Shel, Niel ★ Topological fields and near valuations. 91m:12012

### 13J05 Power series rings [see also 13F25]

- Abhyankar, Shreeram S. (with Heinzer, William; Wiegand, Sylvia) On the compositum of two power series rings. 91j:13015
- Heinzer, William see Abhyankar, Shreeram S.; et al., 91j:13015
- Wiegand, Sylvia see Abhyankar, Shreeram S.; et al., 91j:13015

#### Items with secondary classifications in 13J05

- Becker, Thomas Standard bases and some computations in rings of power series. 91b:13031
- Elliott, George A. (with Ribenboim, Paulo) Fields of generalized power series. 91b:13026
- Ribenboim, Paulo see Elliott, George A., 91b:13026
- Sharif, Habib see Woodcock, Christopher F., 91b:13027
- Woodcock, Christopher F. (with Sharif, Habib) Hadamard products of rational formal power series. 91b:13027

### 13J10 Complete rings, completion [see also 13B35]

- Kuan, Wei-Eih (with Rothaus, Christel) On unramifying transcendence base. 91b:13033
- Rothaus, Christel see Kuan, Wei-Eih, 91b:13033

#### Items with secondary classifications in 13J10

- Abhyankar, Shreeram S. (with Heinzer, William; Wiegand, Sylvia) On the compositum of two power series rings. 91j:13015
- Enochs, Edgar E. The first term in a minimal pure injective resolution. 91e:13014
- Heinzer, William see Abhyankar, Shreeram S.; et al., 91j:13015
- Nishimura, Jun-ichi (with Nishimura, Toshio<sup>1</sup>) Ideal-adic completion of Noetherian rings. II. 91b:13014
- Nishimura, Toshio<sup>1</sup> see Nishimura, Jun-ichi, 91b:13014
- Sharif, Habib see Woodcock, Christopher F., 91b:13027
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- Wiegand, Sylvia see Abhyankar, Shreeram S.; et al., 91j:13015
- Woodcock, Christopher F. (with Sharif, Habib) Hadamard products of rational formal power series. 91b:13027

### 13J15 Henselian rings [see also 13B40]

- Estrada, Mario Some remarks on Artin's approximation property in the nonlocal case and excellent Henselian rings. 91j:13016

#### Items with secondary classifications in 13J15

- Abhyankar, Shreeram S. (with Heinzer, William; Wiegand, Sylvia) On the compositum of two power series rings. 91j:13015
- Heinzer, William see Abhyankar, Shreeram S.; et al., 91j:13015
- Nashier, Budh Henselian rings and Weierstrass polynomials. 91j:13013
- Popescu, Dorin Letter to the editor: "General Néron desingularization and approximation" [Nagoya Math. J. 104 (1986), 85–115; MR 88a:14007]. 91e:14003
- Indecomposable Cohen-Macaulay modules and their multiplicities. 91c:13019

Spivakovsky, Mark Valuations, the linear Artin approximation theorem and convergence of formal functions. 91m:14007

Wiegand, Sylvia *see* Abhyankar, Shreeram S.; et al., 91j:13015

### 13J20 Global topological rings

Items with secondary classifications in 13J20

Ameziane, Hassani Rachid Espaces de suites sur un module  $\beta$  et  $\gamma$ -dualité. [Spaces of sequences over a  $\beta$  module and  $\gamma$ -duality] 91d:46008

### 13J25 Ordered rings [see also 06F25]

Valente, K. G. A note on valuations,  $p$ -primes and the holomorphy subring of a commutative ring. 91h:13019

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Grover, V. K. (with Sankaran, N.) Projective modules and approximation couples. 91i:13008

Harbater, David *see* Denef, Jan, 91b:14004

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### 13K05 Witt vectors and related rings

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— Erratum: "Verschiebung und Frobenius operators" [Proc. Indian Acad. Sci. Math. Sci. 100 (1990), no. 1, 37–43; MR 91c:13021]. 91c:13029

Items with secondary classifications in 13K05

Dayton, Barry H. (with Weibel, Charles A.) On the naturality of Pic,  $SK_0$  and  $SK_1$ . 91b:14005

— The Picard group of a reduced  $G$ -algebra. 91d:14002

Katsura, Toshiyuki (with Shimizu, Yuji; Ueno, Kenji) New bosonization and conformal field theory over  $\mathbb{Z}$ . 91c:14030

Marshall, Murray A. Decomposing Witt rings of characteristic two. 91f:10300

Shimizu, Yuji *see* Katsura, Toshiyuki; et al., 91c:14030

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Varadarajan, K. Aperiodic rings, necklace rings and Witt vectors. II. 91f:05013

— (with Wehrhahn, K.) Aperiodic rings, necklace rings, and Witt vectors. 91f:05012

Wehrhahn, K. *see* Varadarajan, K., 91f:05012

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### 13L05 Applications of logic to commutative algebra [see also 03Cxx, 03Hxx]

Bazzoni, Silvana (with Salce, Luigi) On nonstandard uniserial modules over valuation domains and their quotients. 91a:13012

Salce, Luigi *see* Bazzoni, Silvana, 91a:13012

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Jensen, Christian U. (with Lenzing, Helmut)  $\star$  Model-theoretic algebra with particular emphasis on fields, rings, modules. 91m:03038

Lawrence, John W. *see* Burris, Stanley, 91k:03027

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Nijp, Aaa Ultraproducts of some classes of modules. (Romanian summary) 91h:03043

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### 13Mxx Finite commutative rings {For number-theoretic aspects, see 11Txx.}

#### 13M05 Structure

Erastov, K. D. Integral closure of a finite ring. (Russian) (*see* 91h:00031)

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Steidl, Gabriele On normal bases for finite commutative rings. 91k:11176

### 13Nxx Differential algebra [see also 12H05, 14F10]

#### 13N05 Modules of differentials [see also 16S32]

Vasconcelos, Wolmer V. Modules of differentials of symmetric algebras. 91c:13021

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Buium, Alexandru Splitting differential algebraic groups. 91b:12008

Carra Ferro, Giuseppe Kolchin schemes. 91a:12009

Egorchenko, I. A. Differential invariants of Euclidean algebra. 91g:58300

### 13N10 Rings of differential operators [see also 16S32, 32C38]

Items with secondary classifications in 13N10

Musson, Ian M. Differential operators on some affine cones. 91j:16030

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### 13Pxx Computational aspects of commutative algebra [see also 68Q40]

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### 13P05 Polynomials, factorization [see also 12Y05]

Canny, John Generalised characteristic polynomials. 91i:13030

Giusti, Marc (with Lazard, Daniel; Valibouze, Annick) Algebraic transformations of polynomial equations, symmetric polynomials and elimination. 91a:13013

Kozen, Dexter (with Landau, Susan) Polynomial decomposition algorithms. 91c:13022

— (with Landau, Susan) Errata: "Polynomial decomposition algorithms" [J. Symbolic Comput. 7 (1989), no. 5, 445–456; MR 91c:13022]. (Not in MR)

Landau, Susan *see* Kozen, Dexter, 91c:13022 and (Not in MR)

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Valibouze, Annick *see* Giusti, Marc; et al., 91a:13013

### 13P10 Polynomial ideals, Gröbner bases

Assi, Abdallah Une variante de l'algorithme de Mora. (English summary) [A variant of Mora's algorithm] 91d:13026

Becker, Thomas Standard bases and some computations in rings of power series. 91i:13031

Chou, Shang-Ching (with Schelter, William F.; Yang, Jin Gen) An algorithm for constructing Gröbner bases from characteristic sets and its application to geometry. 91c:13022

Dubé, Thomas W. The structure of polynomial ideals and Gröbner bases. 91h:13021

van den Essen, Arno A criterion to decide if a polynomial map is invertible and to compute the inverse. 91c:13023

Galligo, André (with Pottier, Loïc; Traverso, Carlo) Greater easy common divisor and standard basis completion algorithms. 91h:13034

Gebauer, Rüdiger (with Möller, H. Michael) On an installation of Buchberger's algorithm. 91a:13014

Gianni, Patrizia (with Mora, Teo) Algebraic solution of systems of polynomial equations using Gröbner bases. 91c:13024

— Properties of Gröbner bases under specializations. 91g:13032

Giusti, Marc Complexity of standard bases in projective dimension zero. 91b:13035

Hogan, Robert W. *see* Kobayashi, Hidetsune; et al., 91d:13027

Kalkbrener, Michael Solving systems of algebraic equations by using Gröbner bases. 91g:13031

Kandri-Rody, A. (with Weispfenning, Volker) Noncommutative Gröbner bases in algebras of solvable type. 91c:13025

Kobayashi, Hidetsune (with Moritsugu, Shuichi; Hogan, Robert W.) On radical zero-dimensional ideals. 91d:13027

Kredel, Heinz Primary ideal decomposition. 91g:13033

Lejeune-Jalabert, Monique (with Philippe, Anne) Un algorithme de calcul de changements de coordonnées génériques. (English summary) [An algorithm for computing generic coordinate changes] 91d:13028

Legar, Alessandro Constructions over localizations of rings. 91h:13022

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Robbiano, Lorenzo (with Sweedler, Moss E.) Subalgebra bases. 91f:13027

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— *see also* Robbiano, Lorenzo, 91f:13027

- Takeshima, Taku *see* Sasaki, Tateaki, 91e:13027  
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 Traverso, Carlo *see* Galligo, André; et al., 91b:13034  
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 — Gröbner bases for polynomial ideals over commutative regular rings. 91b:13036  
 — *see also* Kandri-Rody, A., 91e:13025  
 Winkler, Franz Solution of equations. I. Polynomial ideals and Gröbner bases. 91b:13013  
 Yang, Jin Gen *see* Chou, Shang-Ching; et al., 91e:13022  
 Yap, Chee-Keng *see* Mishra, Bud, 91e:13026
- Items with secondary classifications in 13P10
- Arnberg, Stefan Experiments with a projection operator for algebraic decomposition. 91f:68098  
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 Caniglia, L. (with Guccione, J. A.; Guccione, J. J.) Ideals of generic minors. 91b:13016  
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 Eliash, Shalom (with Kervaire, Michel) Minimal resolutions of some monomial ideals. 91b:13019  
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 Hoffmann, Christoph M. Algebraic and numerical techniques for offsets and blends. 91f:65039  
 Kervaire, Michel *see* Eliash, Shalom, 91b:13019  
 (Lazard, Daniel) *see* Davenport, J. H.; et al., 91j:68061  
 Neff, C. Andrew Decomposing algebraic sets using Gröbner bases. 91f:68100  
 Portelli, Dario (with Spangher, Walter) Rees algebras and Gröbner bases. 91d:13007  
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 Spangher, Walter *see* Portelli, Dario, 91d:13007  
 Sturmfeis, Bernd Gröbner bases and Stanley decompositions of determinantal rings. 91m:14076  
 Tournier, E. *see* Davenport, J. H.; et al., 91j:68061

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- Kondrat'eva, M. V. (with Pankrat'ev, E. V.) A recursive algorithm for the computation of the Hilbert polynomial. 91b:13023  
 Pankrat'ev, E. V. *see* Kondrat'eva, M. V., 91b:13023
- Items with secondary classifications in 13P99
- Larson, Richard G. Hopf algebras via symbolic algebra. 91d:16072

## 14-XX Algebraic geometry

### 14-02 Research exposition (monographs, survey articles)

- Dąbrowski, Ludwik (with Reina, Cesare) Some algebraic geometrical methods in string theory. 91j:14001  
 Reina, Cesare *see* Dąbrowski, Ludwik, 91j:14001  
 Umemura, Hiroshi Algebraic-geometric problems arising from Painlevé's works. (see 91m:00023)

Items with secondary classifications in 14-02

- Danilov, V. I. Cohomology of algebraic varieties. (Russian) 91f:14016  
 Green, Mark L. Koszul cohomology and geometry. 91k:14012  
 Iskovskikh, V. A. (with Shafarevich, I. R.) Algebraic surfaces. (Russian) 91f:14029  
 van Lint, Jacobus H. Algebraic geometric codes. 91d:14008  
 Miyaoka, Yoichi Themes and variations—on inequalities of Chern classes. (Japanese) 91j:14003  
 Shafarevich, I. R. *see* Iskovskikh, V. A., 91f:14029

### 14-03 Historical (must also be assigned at least one classification number from Section 01)

- Teissier, Bernard Quelques points de l'histoire des variétés polaires, de Poncelet à nos jours. [Some aspects of the theory of polar manifolds, from Poncelet to today] 91m:14001

Items with secondary classifications in 14-03

- (Blanton, John D.) *see* Euler, Leonhard, 91i:01143  
 Blass, Piotr The influence of Oscar Zariski on modern algebraic geometry. 91b:01067  
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 Gray, Jeremy J. Algebraic geometry in the late nineteenth century. 91f:01013  
 — Algebra in der Geometrie von Newton bis Plücker. [Algebra in geometry from Newton to Plücker] 91i:01043

- (Grothendieck, Alexander) *see* Serre, Jean-Pierre, 91b:01084  
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 Koval'shchik, L. V. Fragments of the history of algebraic geometry in the Ukraine. (Russian) 91g:01029  
 Parshall, Karen V. Hunger Toward a history of nineteenth-century invariant theory. 91b:01049  
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 Severi, Francesco ★ Opere matematiche: memorie e note. Vol. V: 1942-1948. (Italian) [Mathematical works: memoirs and notes. Vol. V: 1942-1948] 91b:01099a  
 — ★ Opere matematiche: memorie e note. Vol. VI: 1949-1961. (Italian) [Mathematical works: memoirs and notes. Vol. VI: 1949-1961] 91b:01099b  
 Umemura, Hiroshi Algebraic-geometric problems arising from Painlevé's works. (see 91m:00023)  
 Wimmer, Harald K. On the history of the Bezoutian and the resultant matrix. 91j:01024  
 (Zariski, Oscar) *see* Blass, Piotr, 91b:01067
- Items listed otherwise than by author
- Bibliography:  
 Grothendieck, Alexander *see* Serre, Jean-Pierre, 91b:01084  
 Severi, Francesco *see* Severi, Francesco, 91b:01099b
- Biography:  
 Zariski, Oscar *see* Blass, Piotr, 91b:01067

### 14-04 Explicit machine computation and programs (not the theory of computation or programming)

- Galligo, André (with Traverso, Carlo) Practical determination of the dimension of an algebraic variety. 91b:14001  
 Traverso, Carlo *see* Galligo, André, 91b:14001
- Items with secondary classifications in 14-04
- Bajaj, Chandrjit L. Geometric modelling with algebraic surfaces. 91d:65019  
 Sederberg, Thomas W. (with Zhao, Junwu; Zundel, Alan K.) Approximate parametrization of algebraic curves. 91a:65040  
 Zhao, Junwu *see* Sederberg, Thomas W.; et al., 91a:65040  
 Zundel, Alan K. *see* Sederberg, Thomas W.; et al., 91a:65040

### 14-06 Proceedings, conferences, collections, etc.

- (Cornalba, Maurizio) *see* Lectures on Riemann surfaces, 91b:14001  
 (Gankrelidze, R. V.) *see* Current problems in mathematics. Fundamental directions, 91a:14001 and 91a:14002  
 (Geramita, Anthony V.) *see* Seminar: Curves, 91b:14001  
 (Gómez-Mont, Xavier) *see* Lectures on Riemann surfaces, 91b:14001  
 (Harbourne, Brian) *see* Algebraic geometry: Sundance 1988, 91m:14002  
 (King, A. D.) *see* Helices and vector bundles, 91e:14002  
 (Kobak, P.) *see* Helices and vector bundles, 91e:14002  
 (Kurke, H.) *see* Algebraic geometry, 91g:14001  
 (Maciocia, Antony) *see* Helices and vector bundles, 91e:14002  
 (Mora, Teo) *see* Effective methods in algebraic geometry, 91m:14003  
 (Panyushev, D. L.) *see* Algebraic geometry, 91k:14001  
 (Speiser, Robert) *see* Algebraic geometry: Sundance 1988, 91m:14002  
 (Steenbrink, J. H. M.) *see* Algebraic geometry, 91g:14001  
 (Traverso, Carlo) *see* Effective methods in algebraic geometry, 91m:14003  
 (Verjovsky, Alberto) *see* Lectures on Riemann surfaces, 91b:14001  
 (Voskresenskii, V. E.) *see* Arithmetic and geometry of manifolds, 91k:14002  
 (Xambó-Descamps, S.) *see* Enumerative geometry, 91e:14001

Items listed otherwise than by author

- Algebraic geometry ★ Алгебраическая геометрия. 4. (Russian) [Algebraic geometry. 4] 91k:14001  
 — ★ Algebraic geometry. 91g:14001  
 Algebraic geometry: Sundance 1988 ★ Algebraic geometry: Sundance 1988. 91m:14002  
 Arithmetic and geometry of manifolds ★ Арифметика и геометрия многообразий. (Russian) [Arithmetic and geometry of manifolds] 91k:14002  
 Berlin ★ Algebraic geometry. 91g:14001  
 Castiglione ★ Effective methods in algebraic geometry. 91m:14003  
 Conference:  
 Algebraic Geometry ★ Algebraic geometry. 91g:14001  
 — ★ Algebraic geometry: Sundance 1988. 91m:14002  
 Enumerative Geometry ★ Enumerative geometry. 91e:14001  
 Contemporary Mathematics ★ Algebraic geometry: Sundance 1988. 91m:14002  
 Current problems in mathematics. Fundamental directions ★ Современные проблемы математики. Фундаментальные направления. Том 35. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 35] 91a:14001  
 — ★ Современные проблемы математики. Фундаментальные направления. Том 36. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 36] 91a:14002  
 Effective methods in algebraic geometry ★ Effective methods in algebraic geometry. 91m:14003  
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 — ★ Современные проблемы математики. Фундаментальные направления. Том 36. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 36] 91a:14002  
 — ★ Алгебраическая геометрия. 4. (Russian) [Algebraic geometry. 4] 91k:14001



- Kingston, ON** ★ The Curves Seminar at Queen's. Vol. VII. 91i:14001  
**Lecture Notes in Mathematics** ★ Enumerative geometry. 91e:14001  
**Lectures on Riemann surfaces** ★ Lectures on Riemann surfaces. 91h:14001  
**Progress in Mathematics** ★ Effective methods in algebraic geometry. 91m:14003  
**Schriftenreihe des Mathematischen Instituts der Universität Münster, Series 3, Heft 3**  
 ★ Schriftenreihe des Mathematischen Instituts der Universität Münster, 3. Serie. Heft 3. (German) [Series of the Mathematical Institute of the University of Münster, Series 3. Vol. 3] 91m:14004  
**Seminars:**  
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**Sitzes** ★ Enumerative geometry. 91e:14001  
**Sundance, UT** ★ Algebraic geometry: Sundance 1988. 91m:14002  
**Symposium:**  
**Effective Methods in Algebraic Geometry** ★ Effective methods in algebraic geometry. 91m:14003  
**Trieste** ★ Lectures on Riemann surfaces. 91h:14001

#### Items with secondary classifications in 14-06

- (Cartier, Pierre) see Festschrift: Grothendieck, Alexander, 91h:00035  
 (Francaviglia, Mauro) see Global geometry and mathematical physics, 91h:00028  
 (Gerasimov, V. N.) see Conference: Algebra, (Not in MR)  
 (Gherardelli, Francesco) see Global geometry and mathematical physics, 91h:00028  
 (Grothendieck, Alexander) see Festschrift: Grothendieck, Alexander, 91h:00035  
 (Illusie, Luc) see Festschrift: Grothendieck, Alexander, 91h:00035  
 (Katz, Nicholas M.) see Festschrift: Grothendieck, Alexander, 91h:00035  
 (Kharchenko, V. K.) see Conference: Algebra, (Not in MR)  
 (Kraft, Hanspeter) see Algebraic transformation groups and invariant theory, 91m:14074  
 (Laumon, Gérard) see Festschrift: Grothendieck, Alexander, 91h:00035  
 (Lê Dũng Tráng) see Introduction to the theory of singularities, 91e:32031 and 91e:32032  
 (Mal'tsev, A. I.) see Conference: Algebra, (Not in MR)  
 (Manin, Yu. I.) see Festschrift: Grothendieck, Alexander, 91h:00035  
 (Medvedev, Yu. A.) see Conference: Algebra, (Not in MR)  
 (Ribet, Kenneth A.) see Festschrift: Grothendieck, Alexander, 91h:00035  
 (Słodowy, Peter) see Algebraic transformation groups and invariant theory, 91m:14074  
 (Springer, Tony A.) see Algebraic transformation groups and invariant theory, 91m:14074

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- Algebraic groups and related topics** ★ Daist gun to sono shūhen. [Algebraic groups and related topics] 91m:20064  
**Algebraic transformation groups and invariant theory** ★ Algebraische Transformationsgruppen und Invariantentheorie. (German) [Algebraic transformation groups and invariant theory] 91m:14074  
**Algebraische Transformationsgruppen und Invariantentheorie** ★ Algebraische Transformationsgruppen und Invariantentheorie. (German) [Algebraic transformation groups and invariant theory] 91m:14074

#### Birthday:

- Grothendieck, Alexander** ★ The Grothendieck Festschrift. Vol. I. 91h:00035

#### Conference:

- Algebra** ★ Международная Конференция по Алгебре. (Russian) [International Conference on Algebra] (Not in MR)

#### Festschrift:

- Grothendieck, Alexander** ★ The Grothendieck Festschrift. Vol. I. 91h:00035  
**Global geometry and mathematical physics** ★ Global geometry and mathematical physics. 91h:00028

#### Introduction à la théorie des singularités

- ★ Introduction to the theory of singularities. I. (French) [Introduction to the theory of singularities. I] 91e:32031  
 — ★ Introduction to the theory of singularities. II. (French) [Introduction to the theory of singularities. II] 91e:32032

#### Introduction to the theory of singularities

- ★ Introduction to the theory of singularities. I. (French) [Introduction to the theory of singularities. I] 91e:32031  
 — ★ Introduction to the theory of singularities. II. (French) [Introduction to the theory of singularities. II] 91e:32032

#### Lecture Notes in Mathematics

- ★ Global geometry and mathematical physics. 91h:00028

#### Montecatini Terme

- ★ Global geometry and mathematical physics. 91h:00028

#### Novosibirsk

- ★ Международная Конференция по Алгебре. (Russian) [International Conference on Algebra] (Not in MR)

#### Progress in Mathematics

- ★ The Grothendieck Festschrift. Vol. I. 91h:00035

#### Seminars:

- Global Geometry and Mathematical Physics** ★ Global geometry and mathematical physics. 91h:00028

#### Symposium:

- Algebraic Groups and Related Topics** ★ Daist gun to sono shūhen. [Algebraic groups and related topics] 91m:20064

## 14Axx Foundations

### 14A05 Relevant commutative algebra [see also 13--XX]

Items with secondary classifications in 14A05

- Bernstein, Isabel** Sur les degrés d'une base standard minimale pour l'ordre lexicographique d'un idéal dont la variété des zéros est Cohen-Macaulay de dimension 1. (English summary) [On the degrees of a minimal standard basis for the lexicographic order of an ideal  $I$  such that  $V(I)$  is a one-dimensional Cohen-Macaulay cone] 91b:13009

- Facchini, Alberto** Divisible modules and space of divisibility of an integral domain. (Italian summary) 91e:13008  
**Herrmann, Manfred** (with Ikeda, Shin) Three notes on the order of ideals defining hypersurfaces. 91f:13026  
**Ikeda, Shin** see Herrmann, Manfred, 91f:13026  
**Pan, Jiang Min** The Gerasmita-Orechia conjecture. (Chinese) 91m:13014  
**Schmidt, Klaus D.** Automorphisms of compact abelian groups and affine varieties. 91j:28015

## 14A15 Schemes

- Picavet, Gabriel** Une construction de faisceaux et de schemas. (English and Italian summaries) [A construction of sheaves and schemes] 91c:14001

Items with secondary classifications in 14A15

- Alonso Tarrío, Leovigildo** ★ Esquemas nórdicos y la semicontinuidad de los defectos de intersección completa. (Spanish) [Nordic schemes and semicontinuity of complete-intersection defects] 91g:13014  
**Carra Ferro, Giuseppa** Kolchin schemes. 91a:12009  
**Hirschowitz, A.** Nouvelles fonctions constructibles et rang des images directes. [New constructible functions and the rank of direct images] 91c:14023  
**Picavet, Gabriel** Pureté, rigidité, et morphismes entiers. (English summary) [Purity, rigidity, and integral morphisms] 91c:14021

## 14A20 Generalizations (algebraic spaces, motifs)

Items with secondary classifications in 14A20

- Köck, Bernhard** Chow motif and higher Chow theory of  $G/P$ . 91m:14077  
**Schwartz, Niels** Open morphisms of real closed spaces. 91g:14057  
 — Eine universelle Eigenschaft reell abgeschlossener Räume. [A universal property of real-closed spaces] 91g:14047

## 14A22 Noncommutative algebraic geometry; algebraic supervarieties [see also 14M30, 32C11, 58A50]

- Artin, M.** (with Van den Bergh, Michel) Twisted homogeneous coordinate rings. 91k:14003

**Van den Bergh, Michel** see Artin, M., 91k:14003

Items with secondary classifications in 14A22

- Bartocci, Claudio** (with Bruzzo, Ugo) On DeWitt supermanifolds and their Picard variety. (French summary) 91a:58015  
**Bruzzo, Ugo** see Bartocci, Claudio, 91a:58015  
**Feigin, B. L.** see Odesskii, A. V., 91e:16037  
**Manin, Yu. I.** Superalgebraic curves and quantum strings. (Russian) 91m:14084  
**Myung, Y. S.** Spin structures in  $N = 2$  super Riemann surfaces of genus 1. 91b:14070  
**Odesskii, A. V.** (with Feigin, B. L.) Sklyanin's elliptic algebras. 91e:16037  
**Struppa, Daniele C.** Geometric aspects in algebraic analysis. (Italian. English summary) 91e:58178  
**Verbitski, A. B.** Serre cohomology of noncommutative rings and Morita equivalence. 91d:16010

## 14A25 Elementary questions

Items with secondary classifications in 14A25

- Matuszyk, Hanna** Regularity and coregularity in quasi-algebraic spaces. 91b:58009  
**Picavet, Gabriel** Une construction de faisceaux et de schemas. (English and Italian summaries) [A construction of sheaves and schemes] 91c:14001

## 14A99 None of the above, but in this section

- Chou, Shang-Ching** see Ko, Hai Ping, 91c:14002  
**Ko, Hai Ping** (with Chou, Shang-Ching) A decision method for certain algebraic geometry problems. 91c:14002

Items with secondary classifications in 14A99

- Jaffe, David B.** Relative representability of group scheme sections. 91d:14030  
**Nishimura, Hirokazu** Some corrections on my paper: "Some connections between Heyting valued set theory and algebraic geometry—prolegomena to intuitionistic algebraic geometry" [Publ. Res. Inst. Math. Sci. 23 (1987), no. 3, 501–515; MR 88k:03125]. 91g:03117

## 14Bxx Local theory [see also 32Sxx]

### 14B05 Singularities [see also 14E15, 14H20, 32Sxx, 58C27]

- Atiyah, T. M.** On the uniformization of some pairs of functions of three variables. (Georgian. English and Russian summaries) 91i:14002  
**Casas-Alvero, E.** Infinitely near imposed singularities and singularities of polar curves. 91h:14002  
**Daigle, D.** Relative Frobenius of plane singularities. 91h:14003  
**Demazure, Michel** Anneaux gradués normaux. [Normal graded rings] 91k:14004  
**Elias, Juan A.** A note on the one-dimensional systems of formal equations. (French summary) 91h:14002  
**Kluitmann, P.** Addendum to the paper: "Distinguished bases of Milnor lattices of simple singularities" [Abh. Math. Sem. Univ. Hamburg 55 (1985), 183–190; MR 87e:14004] by E. Voigt. (German) 91k:14005

- Kulkarni, Devadatta M. On the semigroup of an ordinary multiple point. 91k:14006  
 (Voigt, E.) *see* Klutmann, P., 91k:14005  
 Yonemura, Takashi Hypersurface simple  $K3$  singularities. 91f:14001

#### Items with secondary classifications in 14B05

- Adler, Mark (with van Moerbeke, Pierre) The Toda lattice, Dynkin diagrams, singularities and abelian varieties. 91m:14071  
 Cossart, V. Polyèdre caractéristique et éclatements combinatoires. [Characteristic polyhedra and combinatorial blowups] 91g:14013  
 Cutkosky, Steven Dale A new characterization of rational surface singularities. 91h:14045  
 Dimca, Alexandru On the Milnor fibrations of weighted homogeneous polynomials. 91m:32038  
 Elias, Juan Characterization of the Hilbert-Samuel polynomials of curve singularities. 91h:13016  
 Farouki, R. T. *see* Sakka, Takis, 91f:14056  
 Fujita, Takao On singular del Pezzo varieties. 91h:14057  
 Granja Barón, Angel Coefficient fields for plane curves and equisingularity. 91h:14024  
 Ishida, Masa-Nori  $T$ -complexes and Ogata's zeta zero values. 91k:14037  
 Kraft, Hanspeter Closures of conjugacy classes in  $G_2$ . 91a:17020  
 Kuo, Tze Char Generalized Newton-Puiseux theory and Hensel's lemma in  $\mathbb{C}[x, y]$ . 91d:14010

- Lê Dũng Tráng (with Michel, Françoise; Weber, Claude) Sur le comportement des polaires associées aux germes de courbes planes. [On the behavior of polars associated with germs of plane curves] 91h:32041

- Markushevich, D. G. Canonical singularities of affine cones. (Russian) (see 91k:00013)  
 McCrory, Clint (with Shifrin, Theodore; Varley, Robert) The Gauss map of a generic hypersurface in  $\mathbb{P}^4$ . 91f:14039

- Michel, Françoise *see* Lê Dũng Tráng; et al., 91h:32041  
 van Moerbeke, Pierre *see* Adler, Mark, 91m:14071

- Onishi, Akira Normal genera of two-dimensional local rings. 91h:13028  
 Pfister, Gerhard (with Schöenemann, Hans) Singularities with exact Poincaré complex but not quasihomogeneous. 91h:32039

- Pienc, Ragni Cycles polaires et classes de Chern pour les variétés projectives singulières. [Polar cycles and Chern classes for singular projective varieties] 91j:32040

- Rivero Álvarez, Margarita ★ Singularidades de curvas planas reales: estudio comparativo de sistemas completos de invariantes de equisingularidad. (Spanish) [Singularities of real plane curves: comparative study of complete systems of invariants of equisingularity] 91m:14043

- Sakka, Takis (with Farouki, R. T.) Singular points of algebraic curves. 91f:14056  
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#### 14Dxx Families, fibrations

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- Pöhlmann, Thomas Die Starrheit des 3-dimensionalen projektiven Raums und der 3-dimensionalen Quadrik. [On the rigidity of the 3-dimensional projective space and the 3-dimensional quadric] 91g:32020
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- Beum, Alexandru Birational moduli and nonabelian cohomology. II. 91f:14011
- Maryama, Masaki The equations of plane curves and the moduli spaces of vector bundles on  $P^2$ . *see* 91m:00023
- Narasimhan, M. S. (with Trautmann, G.) Compactification of  $M_{P^2}(0, 2)$  and Poncelet pairs of conics. 91m:14016
- Okonek, Christian *see* Bauer, Stefan, 91g:14010
- Singhof, W. (with Trautmann, G.) On the topology of the moduli space  $M(0, 2)$  of stable bundles of rank 2 on  $P_3$ . 91j:14008
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- Beauville, Arnaud Fibrés de rang 2 sur une courbe, fibré déterminant et fonctions thêta. (English summary) [Rank-2 vector bundles over a curve, determinant bundle and theta functions] 91b:14038
- (with Narasimhan, M. S.; Ramanan, S.) Spectral curves and the generalised theta divisor. 91c:14040
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- Brion, Michel Cohomologie équivariante des points semi-stables. (English summary) [Equivariant cohomology of semistable points] 91m:14017
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- Perelli Cippo, Claudio (with Bigolin, Bruno) Projective and birational invariants of hypersurfaces. (Italian. English summary) 91c:14017

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- Kirwan, Frances (with Lee, Ronnie) The cohomology of moduli spaces of  $K3$  surfaces of degree 2. II. 91e:14034
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- Knop, Friedrich (with Kraft, Hanspeter; Vust, Thierry) The Picard group of a  $G$ -variety. *see* 91m:14074
- Kraft, Hanspeter *see* Knop, Friedrich; et al., (91m:14074) and Algebraic transformation groups and invariant theory, 91m:14074
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- Borcea, Ciprian Deforming varieties of  $k$ -planes of projective complete intersections. 91h:14056

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### 14E09 Automorphisms [see also 14J50, 14L27]

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- Wong, Philip P. W. Note on an elementary proof of a theorem of Nakai and Baba on the Jacobian conjecture in two variables. 91g:13004

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- Cossart, V. Polyèdre caractéristique et éclatements combinatoires. [Characteristic polyhedra and combinatorial blowups] 91g:14013  
 Kreuzer, Bernd Small resolutions of double solids, branched over a 13-nodal quartic surface. 91h:14011  
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- Dèbes, Pierre (with Fried, M. D.) Arithmetic variation of fibers in families of curves. I. Hurwitz monodromy criteria for rational points on all members of the family. 91h:14020  
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- Kawamata, Yujiro Small contractions of four-dimensional algebraic manifolds. 91e:14039  
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### 14E40 Local structure of maps: étale, flat, etc. [see also 13--XX, 14F20]

- Picavet, Gabriel Pureté, rigidité, et morphismes entiers. (English summary) [Purity, rigidity, and integral morphisms] 91c:14021

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- Kennedy, Gary Flatness of tangent cones of a family of hypersurfaces. 91c:14010  
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## 14Fxx (Co)homology theory [see also 13Dxx]

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## 14F05 Vector bundles, sheaves, related construction [see also 18F20, 32Lxx, 46M20]

- Artamkin, I. V. Deformation of torsion-free sheaves on an algebraic surface. 91j:14010  
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- Göttes, Klaus. Zum Torsionsproblem bei Kurvensingularitäten. [On the torsion problem for curve singularities] 91f:14019  
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- Kosarew, Ingrid (with Kosarew, Siegmund) Kodaira vanishing theorems on noncomplete algebraic manifolds. 91j:14012  
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- Ford, Timothy J. On the Brauer group and the cup product map. 91c:14024  
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- Briou, Michel. Cohomologie équivariante des points semi-stables. (English summary) [Equivariant cohomology of semistable points] 91m:14017  
 Carlson, James A. (with Hain, Richard M.) Extensions of variations of mixed Hodge structure. 91c:14016  
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- Abrashkin, V. A. Ramification in étale cohomology. 91i:14014  
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- Abrashkin, V. A. Modular representations of the Galois group of a local field and a generalization of a conjecture of Shafarevich. 91b:11074  
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### 14F32 Intersection (co)homology [see also 32S60]

- Saper, Leslie (with Stern, Mark)  $L_2$ -cohomology of arithmetic varieties. 91m:14027  
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- Durfee, Alan H. (with Saito, Morihiko) Mixed Hodge structures on the intersection cohomology of links. 91m:32039  
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### 14F35 Homotopy theory; fundamental groups [see also 14E20, 14H30]

- Nakamura, Hiroaki Rigidity of the arithmetic fundamental group of a punctured projective line. 91g:14014

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- Cherenack, P. Spherical unirational homotopy groups. 91m:18020  
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### 14F40 de Rham cohomology [see also 14C30, 32C35, 32L10]

- Arapura, Donu Local cohomology of sheaves of differential forms and Hodge theory. 91i:14016  
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 Illusie, Luc Réduction semi-stable et décomposition de complexes de de Rham à coefficients. [Semistable reduction and decomposition of de Rham complexes with coefficients] 91d:14007  
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- Eastwood, Alan Collision de biais et application à l'interpolation. [Bias collision and application to interpolation] 91m:12023

### 14Gxx Arithmetic problems. Diophantine geometry [see also 11Dxx, 11Gxx]

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- Arithmetic algebraic geometry ★ Arithmetic algebraic geometry. 91h:11002  
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### 14G05 Rationality questions, rational points

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- Coombes, Kevin R. (with Grant, David R.) On heterogeneous spaces. 91d:11069  
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### 14G10 Zeta-functions and related questions [see also 11G40] (Birch-Swinnerton-Dyer conjecture)

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- Batyrev, V. V. (with Manin, Yu. I.) Sur le nombre des points rationnels de hauteur bornée des variétés algébriques. [On the number of rational points of bounded height of algebraic varieties] 91g:11069  
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 Katz, Nicholas M. ★ Gauss sums, Kloosterman sums, and monodromy groups. 91a:11028  
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- Goppa, V. D. ★ Geometry and codes. 91a:14013  
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- Baldassarri, F. Algebraic solutions of the Lamé equation and torsion of elliptic curves. (Italian. English summary) 91d:11058  
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- Colliot-Thélène, Jean-Louis (with Parimala, Raman) Real components of algebraic varieties and étale cohomology. 91f:14015  
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- Bujalance, Emilio (with Costa, Antonio F.; Gamboa, J. M.) Real parts of complex algebraic curves. 91h:30065  
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#### 14G30 Real ground fields [see also 32C05. Must also be assigned at least one other number referring to the specific type of problem considered] (1985)

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- Bekbaev, U. D. (with Muminov, K. K.) Rationality of the field of differential invariants of a pair of paths for the action of the group  $Sp(4, K)$  in  $K^4$ . (Russian) (see 91b:00031)  
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 — see also Bekbaev, U. D., (91b:00031)  
 Sukhtaya, A. M. Generators of the differential field of invariant rational functions of paths in finite-dimensional representations of the group of translations of a line. (Russian) (see 91b:00031)

# 14G35 Modular and Shimura varieties [see also 11F41, 11F46, 11G18]

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- Debarre, Olivier (with Laszlo, Yves) Le lieu de Noether-Lefschetz pour les variétés abéliennes. (English summary) [The Noether-Lefschetz locus for abelian varieties] 91j:14039
- Harris, Michael Automorphic forms and the cohomology of vector bundles on Shimura varieties. 91g:11063
- Laszlo, Yves see Debarre, Olivier, 91j:14039
- Wintenberger, Jean-Pierre Torseurs pour les motifs et pour les représentations  $p$ -adiques potentiellement de type CM. [Principal homogeneous spaces for motives and  $p$ -adic representations potentially of CM type] 91g:11067

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- Bost, Jean-Benoît Green's currents and height pairing on complex tori. 91m:14034
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- Gillet, Henri (with Soulé, Christophe) Arithmetic Chow groups and differential characters. 91j:14017
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- (with Soulé, Christophe) Characteristic classes for algebraic vector bundles with Hermitian metric. I. 91m:14032a
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- Lago, Adrian R. Vertex operators for the closed bosonic string theory at arbitrary genus in the operator formalism. 91k:81170
- Manin, Yu. I. see Batyrev, V. V., 91g:11069
- Noguchi, Junjirō Theory of hyperbolic manifolds and Diophantine geometry. (Japanese) 91d:32033
- Saito, Masa-Hiko (with Zucker, Steven M.) Classification of nonrigid families of  $K3$  surfaces and a finiteness theorem of Arakelov type. 91k:14024
- Shimizu, Yuji see Katsura, Toshiyuki; et al., 91d:14029
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- Geyer, Wolf-Dieter (with Jarden, Moshe) On stable fields in positive characteristic. 91E12008
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- Jarden, Moshe see Geyer, Wolf-Dieter, 91E12008
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- Kempf, George R. Rank  $g$  Picard bundles are stable. 91e:14026
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- (with Bolondi, Giorgio) Construction of families of curves from finite length graded modules. 91j:14022
- Bardelli, Fabio Lectures on stable curves. 91j:14019
- Bolondi, Giorgio see Ballico, Edoardo, 91c:14008 and 91j:14022
- Catalisano, Maria Virginia Linear systems of plane curves through fixed "fat" points of  $\mathbb{P}^2$ . 91h:14012
- Chang, Hai Ch'ao On the degeneration of some plane algebraic curves. 91m:14047

- Ciliberto, Ciro (with Sernesi, Edoardo) Families of varieties and the Hilbert scheme. 91j:14002
- Colombo, E. (with Pirola, Gian Pietro) Some density results for curves with nonsimple Jacobians. 91h:14030
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- Martin-Deschamps, Mireille (with Perrin, Daniel) Sur la classification des courbes gauches. I. (English summary) [Classification of space curves. I.] 91e:14029  
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- Sernesi, Edoardo see Ciliberto, Ciro, 91j:14002
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- Matsumoto, Kenji On modular functions in 2 variables attached to a family of hyperelliptic curves of genus 3. 91c:14035
- Nag, Subhashis Canonical measures on the moduli spaces of compact Riemann surfaces. 91f:14023
- Namikawa, Yukio On the degenerate fibres in families of curves (known results and open problems). 91k:14016
- Natanson, S. M. Spin bundles on real algebraic curves. 91c:14036
- Seppälä, Mika Real algebraic curves in the moduli space of complex curves. 91j:14020
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- Erratum: "Fractional indices of log del Pezzo surfaces" [Izv. Akad. Nauk SSSR Ser. Mat. 52 (1988), no. 6, 1288–1304; MR 91a:14023]. (Russian) 91k:14025
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- Kirwan, Frances (with Lee, Ronnie) The cohomology of moduli spaces of  $K3$  surfaces of degree 2. II. 91e:14034
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- Tsunoda, Shuichiro Monge-Ampère equations on an algebraic variety with positive characteristic. (see 91m:00023)

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- Franke, Jens (with Manin, Yu. I.; Chinkel', Yu.) Erratum: "Rational points of bounded height on Fano varieties" [Invent. Math. 95 (1989), no. 2, 421–435; MR 89m:11060]. 91e:11068
- Holzappel, R.-P. Volumes of fundamental domains of Picard modular groups. 91d:11052
- Kuwata, Masato The canonical height and elliptic surfaces. 91h:11045
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- Skorobogatov, A. N. Decomposition groups of rational surfaces, and zero-cycles. (Russian) (see 91k:00013)
- Tankov, S. G. Surfaces of  $K3$  type over number fields and the Mumford-Tate conjecture. 91m:11044
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- Erratum: "Fractional indices of log del Pezzo surfaces" [Izv. Akad. Nauk SSSR Ser. Mat. 52 (1988), no. 6, 1288–1304; MR 91a:14023]. (Russian) 91k:14025
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- see also **Algebraic transformation groups and invariant theory**, 91m:14074
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- Bekbaev, U. D. (with Muminov, K. K.) Rationality of the field of differential invariants of a pair of paths for the action of the group  $SP(4, K)$  in  $K^4$ . (Russian) (see 91b:00031)
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- Migliore, Juan C. (with Miró-Roig, Rosa M.) On  $k$ -Buchsbaum curves in  $P^3$ . 91h:14025
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##### 14M06 Linkage [see also 13C40]

- Bolondi, Giorgio (with Migliore, Juan C.) The Lazarsfeld-Rao problem for Buchsbaum curves. 91e:14046
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- (with Perrin, Daniel) Sur la classification des courbes gauches. [On the classification of space curves] 91h:14039
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- Cumino, Caterina (with Tedeschi, Giulio) Degenerate  $(r - 2)$ -dimensional subvarieties through the generic hyperplane section of a reduced irreducible complex curve in  $P^r$ . 91f:14049

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Bryant, Peter R. Graded Riemann surfaces and Krichever-Novikov algebras. 91m:14083

Falqui, Gregorio (with Reina, Cesare) A note on the global structure of supermoduli spaces. 91k:14038

— (with Reina, Cesare)  $N = 2$  super Riemann surfaces and algebraic geometry. 91f:14050

Manin, Yu. I. Superalgebraic curves and quantum strings. (Russian) 91m:14084

Myung, Y. S. Spin structures in  $N = 2$  super Riemann surfaces of genus 1. 91b:14070

— On  $N = 3$ ,  $SO(3)$  supermodular transformation on superellipses. 91d:14036

Rabin, Jeffrey M. see Topiwala, Pankaj, 91k:14039

Reina, Cesare see Falqui, Gregorio, 91f:14050 and 91k:14038

Topiwala, Pankaj (with Rabin, Jeffrey M.) The super GAGA principle and families of super Riemann surfaces. 91k:14039

Items with secondary classifications in 14M30

de Beer, Willem (with van Tonder, André; Rodrigues, João P.) Superinvolutions on super-Riemann surfaces and the supergeometry of type-I superstrings. 91m:81183

— (with Rodrigues, João P.) Type-I from type-II superstrings. 91m:81184

Bergvelt, M. J. Infinite super Grassmannians and super Plücker equations. 91d:58089

Bryant, Peter R. Representing the super Virasoro algebra by meromorphic vectorfields on the graded Riemann sphere. 91g:17032

— Graded Riemann surfaces and Krichever-Novikov algebras. 91f:17027

Hodgkin, Luke Problems of fields on super Riemann surfaces. 91c:32005

Myung, Y. S. Correlation function for  $N = 1$  superconformal models on the superellipses. 91d:81135

Nelson, Philip Lectures on supermanifolds and strings. (see 91k:81003)

Penkov, I. (with Serganova, V. V.) Cohomology of  $G/P$  for classical complex Lie supergroups  $G$  and characters of some atypical  $G$ -modules. (French summary) 91k:14036

Rodrigues, João P. see de Beer, Willem; et al., 91m:81183 and 91m:81184

Serganova, V. V. see Penkov, I., 91k:14036

van Tonder, André see de Beer, Willem; et al., 91m:81183

## 14M99 None of the above, but in this section

Laksov, Dan The geometry of complete linear maps. 91f:14051

## 14Nxx Classical methods and problems [see also 51-XX]

## 14N05 Projective techniques [see also 51N35]

Arutyunov, A. V. (with Eroshov, S. A.; Tynyanskii, N. T.) Sign-definiteness of a quadratic form on the intersection of quadrics. (Russian) (see 91k:00023)

Ballico, Edoardo On the dual variety in characteristic 2. 91h:14054

Degoll, Lando Individualisation des bases rationnelles des systèmes linéaires de quadriques. (English summary) [Individualization of the rational bases of linear systems of quadrics] 91g:14051

— Sur les fagots, les contrefagots, les déter-cubes et leurs applications. [On bundles, counterbundles, deter-cubes and their applications] 91h:14071

Eroshov, S. A. see Arutyunov, A. V.; et al., (91k:00023)

Homma, Masaaki Reflexivity of tangent varieties associated with a curve. 91m:14085

Ignatenko, V. F. Algebraic surfaces with an infinite set of planes of skew symmetry. I. (Russian) 91g:14052

Shuker, N. H. Commutativity of compounded symmetric two-two correspondences. (Arabic summary) 91i:14041

Tynyanskii, N. T. see Arutyunov, A. V.; et al., (91k:00023)

Items with secondary classifications in 14N05

Ballico, Edoardo (with Migliore, Juan C.) Smooth curves whose hyperplane section is a given set of points. 91h:14034

Catre, Luisella Plane curves as projections of nonsingular space curves. 91g:14022

Catalisano, Maria Virginia "Fat" points on a conic. 91h:14011

— Linear systems of plane curves through fixed "fat" points of  $P^2$ . 91h:14012

Degoll, Lando Un théorème sur la caractéristique de la Jacobienne des systèmes linéaires de quadriques. (Turkish summary) [A theorem on the characteristic of the Jacobian of linear systems of quadrics] 91h:14005

Edge, W. L. The quartic projections of Castelnuovo's normal surface with hyperelliptic prime sections. 91h:14045

Frigerio, Emma (with Turrini, Cristina) On order-two line congruences in  $P^4$ . 91j:14044

Galdiz, Ya. Yu. (with Gindikin, S. G.) Segre hyperboloids and rational submanifolds in Grassmannians. 91h:14068

Gindikin, S. G. see Galdiz, Ya. Yu., 91h:14068

Ida, Monica Generating six skew lines in  $P^3$ . 91a:14003

Ignatenko, V. F. Special algebraic surfaces with an infinite set of planes of oblique symmetry. 91i:51020

Kostov, V. P. (with Shapiro, B. Z.) The flags in  $R^3$ , transversal to a given set of flags, form an  $M$ -manifold. 91a:14032

Migliore, Juan C. see Ballico, Edoardo, 91h:14034

Shapiro, B. Z. see Kostov, V. P., 91a:14032

Teissier, Bernard Quelques points de l'histoire des variétés polaires, de Poncelet à nos jours. [Some aspects of the theory of polar manifolds, from Poncelet to today] 91m:14001

Turrini, Cristina see Frigerio, Emma, 91j:14044

## 14N10 Enumerative problems (combinatorial problems)

Arrondo, Enrique (with Mallavibarrena, Raquel; Sols Lucia, Ignacio) Proof of Schubert's conjectures on double contacts. 91h:14042

Colley, Susan Jane Schubert's coincidence formulas for line complexes and the contribution of embedded planar pencils. 91m:14086

Collino, Alberto (with Fulton, William) Intersection rings of spaces of triangles. 91g:14053

Dai, Xin Sheng see Piene, Ragni, 91h:14040

Drechsler, Konrad (with Sterz, Ulrich) Completion of the variety of conics with respect to contact conditions. II. 91h:14055

Fulton, William see Collino, Alberto, 91g:14053

Giuffrida, Salvatore On the intersection of two curves in  $P^4$ . (Italian summary) 91a:14035

Johnsen, Trygve Local multiplicities of tangential trisecants to space curves. 91h:14056

Le Barz, Patrick Quelques formules multiséchantes pour les surfaces. [Some multiseccant formulas for surfaces] 91h:14043

Mallavibarrena, Raquel see Arrondo, Enrique; et al., 91h:14042

Miret, J. M. (with Xambó-Descamps, S.) On Schubert's degenerations of cuspidal plane cubics. 91h:14044

Piëne, Ragni (with Dai, Xin Sheng) A characterization of balanced rational normal scrolls in terms of their osculating spaces. 91k:14040

Schröder, Olaf Eine Vervollständigung der Chowvarietät der Punkttripel. [A completion of the Chow variety of point triples] 91f:14052

Sols Lucia, Ignacio see Arrondo, Enrique; et al., 91h:14042

Sterz, Ulrich see Drechsler, Konrad, 91h:14055

Xambó-Descamps, S. see Miret, J. M., 91h:14044

Items with secondary classifications in 14N10

Ballico, Edoardo On the dual variety in characteristic 2. 91h:14054

Bifet, Emil On complete symmetric varieties. 91d:14031

Homma, Masaaki A souped-up version of Pardini's theorem and its application to funny curves. 91b:14034

Mallavibarrena, Raquel (with Sols Lucia, Ignacio) Bases for the homology groups of the Hilbert scheme of points in the plane. 91g:14002

Marar, Washington Luiz (with Mond, David) Multiple point schemes for corank 1 maps. 91c:58010

Mond, David see Marar, Washington Luiz, 91c:58010

Russell-Liempart, Francesc The Chow ring of  $Hilb^3 P^3$ . 91h:14008

Sols Lucia, Ignacio see Mallavibarrena, Raquel, 91g:14002

(Xambó-Descamps, S.) see Enumerative geometry, 91e:14001

Items listed otherwise than by author

Conference:

Enumerative Geometry ★ Enumerative geometry. 91e:14001

Enumerative geometry ★ Enumerative geometry. 91e:14001

Lecture Notes in Mathematics ★ Enumerative geometry. 91e:14001

Sitges ★ Enumerative geometry. 91e:14001



## 14N99 None of the above, but in this section

- Drobotukhina, Yu. V. *see* Viro, O. Ya., 91g:14054  
 Viro, O. Ya. (with Drobotukhina, Yu. V.) Configurations of skew-lines. 91g:14054  
 Items with secondary classifications in 14N99  
 Galligo, André (with Traverso, Carlo) Practical determination of the dimension of an algebraic variety. 91b:14001  
 Laksov, Dan The geometry of complete linear maps. 91f:14051  
 Traverso, Carlo *see* Galligo, André, 91b:14001

## 14Pxx Real algebraic and real analytic geometry

- Silhol, Robert ★ Real algebraic surfaces. 91i:14045

## 14P05 Real algebraic sets [see also 12Dxx]

- Andradas, Carlos (with Becker, Eberhard) On the real stability index of rings and its application to semialgebraic geometry. 91m:14087  
 Becker, Eberhard *see* Andradas, Carlos, 91m:14087  
 Benedetti, Riccardo (with Risler, Jean-Jacques) ★ Real algebraic and semi-algebraic sets. 91j:14045  
 Bröcker, Ludwig On the stability index of Noetherian rings. 91g:14055  
 Brumfiel, G. W. The ultralimit theorem in real algebraic geometry. 91d:14037  
 Campillo López, Antonio (with Ruiz, Jesús M.) Some remarks on Pythagorean real curve germs. 91b:14072  
 Feisk, Aszédine Interprétation algébrique de l'exposant de Lojasiewicz. (English summary) [Algebraic interpretation of the Lojasiewicz exponent] 91f:14053  
 González Corbalán, A. (with Recio Muñiz, Tomás J.) Shape invariant lists and realization as plane real algebraic curves with double points. 91c:14065  
 Pecker, Daniel Projections propres de variétés algébriques réelles. (English summary) [Finite projections of real algebraic varieties] 91j:14046  
 Recio Muñiz, Tomás J. *see* González Corbalán, A., 91c:14065  
 Risler, Jean-Jacques *see* Benedetti, Riccardo, 91j:14045  
 Robson, Robert O. Slices: functions for abstract real analysis. 91k:14041  
 Ruiz, Jesús M. A dimension theorem for real spectra. 91a:14036  
 — A going-down theorem for real spectra. 91g:14056  
 — *see also* Campillo López, Antonio, 91b:14072  
 Schwartz, Niels Open morphisms of real closed spaces. 91g:14057  
 — Eine universelle Eigenschaft reell abgeschlossener Räume. [A universal property of real-closed spaces] 91j:14047  
 Tognoli, Alberto Sur la surjectivité des applications algébriques injectives. (English summary) [On the surjectivity of injective algebraic maps] 91i:14046

## Items with secondary classifications in 14P05

- Bochnak, Jacek (with Kucharz, Wojciech) Elliptic curves and real algebraic morphisms into the 2-sphere. 91m:14089  
 Kucharz, Wojciech *see* Bochnak, Jacek, 91m:14089  
 Lombard, Henri Nullstellensatz réel effectif et variantes. (English summary) [Effective real Nullstellensatz and variants] 91d:12018  
 Sujatha, R. Witt groups of real projective surfaces. 91j:14016

## 14P10 Semialgebraic sets and related spaces

- Andradas, Carlos Specialization chains of real valuation rings. 91e:14048  
 Bröcker, Ludwig (with Stengle, Gilbert) On the Mostowski number. 91g:14058  
 Delzell, Charles N. On the Pierce-Birkhoff conjecture over ordered fields. 91b:14073  
 Huber, Roland (with Scheiderer, Claus) A relative notion of local completeness in semialgebraic geometry. 91b:14074  
 Jadda, Zoubida Existence de places réelles et géométrie semi-algébrique. (Italian summary) [Existence of real places and semi-algebraic geometry] 91e:14049  
 Mahé, Louis Une démonstration élémentaire du théorème de Bröcker-Scheiderer. (English summary) [An elementary proof of the Bröcker-Scheiderer theorem] 91h:14057  
 Pardo, Luis M. *see* Recio Muñiz, Tomás J., 91c:14066  
 Pecker, Daniel On the elimination of algebraic inequalities. 91m:14088  
 Recio Muñiz, Tomás J. (with Pardo, Luis M.) Rabin's width of a complete proof and the width of a semialgebraic set. 91c:14066  
 Scheiderer, Claus *see* Huber, Roland, 91b:14074  
 Stengle, Gilbert *see* Bröcker, Ludwig, 91g:14058  
 Zeng, Guang Xing Homogeneous Stellensätze in semialgebraic geometry. 91c:14067

## Items with secondary classifications in 14P10

- Acquistapace, F. (with Benedetti, Riccardo; Broglia, F.) Effectiveness-non-effectiveness in semialgebraic and PL geometry. 91h:57010  
 Andradas, Carlos (with Becker, Eberhard) On the real stability index of rings and its application to semialgebraic geometry. 91m:14087  
 Becker, Eberhard *see* Andradas, Carlos, 91m:14087  
 Benedetti, Riccardo (with Risler, Jean-Jacques) ★ Real algebraic and semi-algebraic sets. 91j:14045  
 — *see also* Acquistapace, F.; et al., 91h:57010  
 Broglia, F. *see* Acquistapace, F.; et al., 91h:57010  
 Chenin, Patrick *see* Marché, D., (91k:68005)  
 Cucker, Felipe Nash functions and the structure sheaf. 91h:14058  
 González-López, María José (with Recio Muñiz, Tomás J.) Some algorithms from real algebraic geometry for the computation of basic problems in robot motion planning. (*see* 91m:00014)  
 Marché, D. (with Chenin, Patrick) Facetisation d'ensembles semi-algébriques. [Facetting of semi-algebraic sets] (*see* 91k:68005)  
 Pecker, Daniel Projections propres de variétés algébriques réelles. (English summary) [Finite projections of real algebraic varieties] 91j:14046

- Recio Muñiz, Tomás J. *see* González-López, María José, (91m:00014)  
 Risler, Jean-Jacques *see* Benedetti, Riccardo, 91j:14045

## 14P15 Real analytic and semianalytic sets [see also 32B20, 32C05]

- Kucharz, Wojciech Global almost analytic algebraicity of analytic sets. 91c:14068  
 Ruiz, Jesús M. On the real spectrum of a ring of global analytic functions. 91e:14050

## 14P20 Nash functions and manifolds [see also 32C07, 58A07]

- Coste, Michel Sous-ensembles algébriques réels de codimension 2. [Real algebraic subsets of codimension 2] 91c:14069  
 Cucker, Felipe Nash functions and the structure sheaf. 91h:14058  
 Items with secondary classifications in 14P20  
 Beretta, Lucia (with Tognoli, Alberto) Nash sets and global equations. (Italian summary) 91h:58001  
 Tognoli, Alberto *see* Beretta, Lucia, 91h:58001

## 14P25 Topology of real algebraic varieties

- Benedetti, Riccardo (with Loeser, François; Risler, Jean-Jacques) Two bounds for the number of connected components of a real algebraic set. 91g:14059  
 Bochnak, Jacek (with Kucharz, Wojciech) Algebraic models of smooth manifolds. 91b:14076  
 — (with Buchner, M.; Kucharz, Wojciech) Vector bundles over real algebraic varieties. 91b:14075  
 — (with Kucharz, Wojciech) On vector bundles and real algebraic morphisms. 91g:14060  
 — (with Buchner, M.; Kucharz, Wojciech) Erratum: "Vector bundles over real algebraic varieties" [K-Theory 3 (1989), no. 3, 271–298; MR 91b:14075]. (Not in MR)  
 — (with Kucharz, Wojciech) Elliptic curves and real algebraic morphisms into the 2-sphere. 91m:14089  
 Buchner, M. *see* Bochnak, Jacek; et al., 91b:14075 and (Not in MR)  
 Gilmer, Patrick Algebraic curves in  $\mathbb{RP}^1 \times \mathbb{RP}^1$ . 91k:14042  
 Korchagin, A. B. New  $M$ -curves of degrees 8 and 9. 91b:14077  
 Kucharz, Wojciech *see* Bochnak, Jacek; et al., 91b:14075; 91b:14076; 91g:14060; 91m:14089 and (Not in MR)  
 Loeser, François *see* Benedetti, Riccardo; et al., 91g:14059  
 Marin, Alexis Sur un théorème de Cheponkus. [On a theorem of Cheponkus] 91c:14070  
 Matsuo, Sachiko Nonsingular algebraic curves in  $\mathbb{RP}^1 \times \mathbb{RP}^1$ . 91f:14054  
 Nabutovsky, Alexander Isotopies and nonrecursive functions in real algebraic geometry. 91c:14071  
 Risler, Jean-Jacques *see* Benedetti, Riccardo; et al., 91g:14059  
 Viro, O. Ya. Real plane algebraic curves: constructions with controlled topology. 91b:14078  
 Items with secondary classifications in 14P25  
 Akbulut, Selman (with King, Henry Churchill) Some new results on the topology of nonsingular real algebraic sets. 91e:57034  
 Coste, Michel Sous-ensembles algébriques réels de codimension 2. [Real algebraic subsets of codimension 2] 91c:14069  
 Dovermann, Karl Heinz (with Masuda, Mikiya; Petrie, Ted) Fixed point free algebraic actions on varieties diffeomorphic to  $\mathbb{R}^n$ . 91e:57061  
 González Corbalán, A. (with Recio Muñiz, Tomás J.) Shape invariant lists and realization as plane real algebraic curves with double points. 91c:14065  
 King, Henry Churchill *see* Akbulut, Selman, 91e:57034  
 Masuda, Mikiya *see* Dovermann, Karl Heinz; et al., 91e:57061  
 Petrie, Ted *see* Dovermann, Karl Heinz; et al., 91e:57061  
 Recio Muñiz, Tomás J. *see* González Corbalán, A., 91c:14065  
 Roy, Marie-Françoise (with Szpirglas, Aviva) Complexity of the computation of cylindrical decomposition and topology of real algebraic curves using Thom's lemma. 91i:14048  
 Szpirglas, Aviva *see* Roy, Marie-Françoise, 91i:14048

## 14P99 None of the above, but in this section

- Items with secondary classifications in 14P99  
 Bhatwadekar, S. M. (with Ischebeck, F.; Ojanguren, Manuel; Schabhuber, G.) Strongly algebraic vector bundles over  $\mathbb{R}^d$ . 91c:14022  
 Colliot-Thélène, Jean-Louis (with Parimala, Raman) Real components of algebraic varieties and étale cohomology. 91j:14015  
 Drobotukhina, Yu. V. *see* Viro, O. Ya., 91g:14054  
 Fiedler, Miroslav Pencils of real symmetric matrices and real algebraic curves. 91h:15011  
 Ischebeck, F. *see* Bhatwadekar, S. M.; et al., 91c:14022  
 Lombard, Henri Théorème des zéros réel effectif et variantes. (English summary) [Effective real nullstellensatz and variants] 91j:12020  
 Ojanguren, Manuel *see* Bhatwadekar, S. M.; et al., 91c:14022  
 Parimala, Raman *see* Colliot-Thélène, Jean-Louis, 91j:14015  
 Schabhuber, G. *see* Bhatwadekar, S. M.; et al., 91c:14022  
 Seppälä, Mika Real algebraic curves in the moduli space of complex curves. 91j:14020  
 Viro, O. Ya. (with Drobotukhina, Yu. V.) Configurations of skew-lines. 91g:14054

## 14Qxx Computational aspects in algebraic geometry [see also 12–04, 68Q40]

- Items with secondary classifications in 14Qxx  
 (Mora, Teo) *see* Effective methods in algebraic geometry, 91m:14003  
 (Traverso, Carlo) *see* Effective methods in algebraic geometry, 91m:14003

Items listed otherwise than by author

Castiglione, C. ★ Effective methods in algebraic geometry. 91m:14003  
Effective methods in algebraic geometry ★ Effective methods in algebraic geometry. 91m:14003

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Effective Methods in Algebraic Geometry ★ Effective methods in algebraic geometry. 91m:14003

## 14Q05 Curves

Abhyankar, Shreeram S. (with Bajaj, Chanderjit L.) Computations with algebraic curves. 91i:14047

Bajaj, Chanderjit L. see Abhyankar, Shreeram S., 91i:14047

Farouki, R. T. see Sakalis, Takis, 91f:14056

Henry, Jean-Pierre Georges (with Merle, M.) Complexity of computation of embedded resolution of algebraic curves. 91f:14055

Merle, M. see Henry, Jean-Pierre Georges, 91f:14055

Roy, Marie-Françoise (with Szpirglas, Aviva) Complexity of the computation of cylindrical decomposition and topology of real algebraic curves using Thom's lemma. 91i:14048

Sakalis, Takis (with Farouki, R. T.) Singular points of algebraic curves. 91f:14056

Szpirglas, Aviva see Roy, Marie-Françoise, 91i:14048

Teitelbaum, Jeremy T. On the computational complexity of the resolution of plane curve singularities. 91g:14061

Items with secondary classifications in 14Q05

Bajaj, Chanderjit L. see Johnstone, John K., 91i:68149

Boehm, Wolfgang Algebraic and differential geometric methods in C.A.G.D. 91f:65036

Johnstone, John K. (with Bajaj, Chanderjit L.) Sorting points along an algebraic curve. 91i:68149

Logar, Alessandro Computational aspects of the coordinate ring of an algebraic variety. 91j:14048

## 14Q10 Surfaces, hypersurfaces

Items with secondary classifications in 14Q10

Boehm, Wolfgang Algebraic and differential geometric methods in C.A.G.D. 91f:65036

Hoffmann, Christoph M. Algebraic and numerical techniques for offsets and blends. 91f:65039

Reid, Miles Infinitesimal view of extending a hyperplane section—deformation theory and computer algebra. 91h:14018

## 14Q15 Higher-dimensional varieties

Grigor'ev, D. Ya. The complexity of computing the genus of a system of exterior differential equations. 91e:14051

Logar, Alessandro Computational aspects of the coordinate ring of an algebraic variety. 91j:14048

Wang, Dong Ming Proving-by-examples method and inclusion of varieties. 91e:14052

Items with secondary classifications in 14Q15

Arnberg, Stefan Experiments with a projection operator for algebraic decomposition. 91f:68098

Neff, C. Andrew Decomposing algebraic sets using Gröbner bases. 91f:68100

## 14Q20 Effectivity

Items with secondary classifications in 14Q20

Acquistapace, F. (with Benedetti, Riccardo; Broglia, F.) Effectiveness-non-effectiveness in semialgebraic and PL geometry. 91h:57010

Benedetti, Riccardo see Acquistapace, F.; et al., 91h:57010

Broglia, F. see Acquistapace, F.; et al., 91h:57010

Teitelbaum, Jeremy T. On the computational complexity of the resolution of plane curve singularities. 91g:14061

## 14Q99 None of the above, but in this section

Items with secondary classifications in 14Q99

Bokowski, Jürgen (with Richter, Jürgen; Sturmfels, Bernd) Nonrealizability proofs in computational geometry. 91d:68121

Giusti, Marc (with Lazard, Daniel; Valibouze, Annick) Algebraic transformations of polynomial equations, symmetric polynomials and elimination. 91a:13013

Lazard, Daniel see Giusti, Marc; et al., 91a:13013

Morgan, Alexander P. (with Sommese, Andrew John) Generically nonsingular polynomial continuation. 91g:65117

Richter, Jürgen see Bokowski, Jürgen; et al., 91d:68121

Sommese, Andrew John see Morgan, Alexander P., 91g:65117

Sturmfels, Bernd see Bokowski, Jürgen; et al., 91d:68121

Valibouze, Annick see Giusti, Marc; et al., 91a:13013

## 15-XX Linear and multilinear algebra; matrix theory (finite and infinite)

Items with secondary classifications in 15-XX

Karadzhov, Georgi E. Spectral asymptotics for Toeplitz matrices generated by the Poisson-Charlier polynomials. (Not in MR)

## 15-01 Instructional exposition (textbooks, tutorial papers, etc.)

(Barbosa, Bernadete) see Postnikov, M., 91j:15002

Belkner, Horst ★ Determinanten und Matrizen. Teil 1, 2. (German) [Determinants and matrices. Part 1, 2] (Not in MR)

Broida, Joel G. (with Williamson, S. Gill) ★ A comprehensive introduction to linear algebra. 91d:15001

Catalani, Mario ★ Teoria delle matrici. (Italian) [Matrix theory] 91k:15001

Cullen, Charles G. ★ Matrices and linear transformations. 91f:15001

(Egidi, Massimo) see Catalani, Mario, 91k:15001

Eisenreich, Günther ★ Lineare Algebra und analytische Geometrie. (German) [Linear algebra and analytic geometry] 91e:15001

Grifone, Joseph ★ Algèbre linéaire. (French) [Linear algebra] 91k:15002

Heesterman, A. R. G. ★ Matrices and their roots. 91m:15001

Horn, Roger A. (with Johnson, Charles Royal) ★ Matrix analysis. 91i:15001

Huppert, Bertram ★ Angewandte lineare Algebra. (German) [Applied linear algebra] 91f:15002

Johnson, Charles Royal see Horn, Roger A., 91i:15001

Li, Qiao ★ Juzhen lun ba jiang. (Chinese) [Eight lectures on matrix theory] 91h:15001

Mirsky, L. ★ An introduction to linear algebra. 91j:15001

Postnikov, M. ★ Álgebra linear. (Portuguese) [Linear algebra] 91j:15002

Procesi, Ciampi, Rita ★ Elementi di algebra lineare. (Italian) [Elements of linear algebra] (Not in MR)

Williamson, S. Gill see Broida, Joel G., 91d:15001

Items with secondary classifications in 15-01

(Alferieff, M. E.) see Kostrikin, Aleksei Ivanovich, 91h:00008

(Artin, Emil) see van der Waerden, B. L., 91h:00009b

Blyth, T. S. ★ Module theory. 91i:16001

van den Essen, Arno Magic squares and linear algebra. 91c:05041

Kielbasinski, Andrzej (with Schwetlick, Hubert) ★ Numerische lineare Algebra. (German) [Numerical linear algebra] 91h:65001

Kostrikin, Aleksei Ivanovich (with Manin, Yu. I.) ★ Linear algebra and geometry. 91h:00008

London, R. R. (with Rogosinski, H. P.) Decomposition theory in the teaching of elementary linear algebra. 91d:15022

Manin, Yu. I. see Kostrikin, Aleksei Ivanovich, 91h:00008

(Noether, Emmy) see van der Waerden, B. L., 91h:00009b

Rogosinski, H. P. see London, R. R., 91d:15022

(Schulenberg, John R.) see van der Waerden, B. L., 91h:00009b

Schwetlick, Hubert see Kielbasinski, Andrzej, 91h:65001

van der Waerden, B. L. ★ Algebra. Vol. II. 91h:00009b

Warner, Seth ★ Modern algebra. 91g:00003

## 15-02 Research exposition (monographs, survey articles)

Brualdi, Richard A. The many facets of combinatorial matrix theory. (Chinese. English summary) (Not in MR)

Curtis, Morton L. ★ Abstract linear algebra. 91i:15003

(Hempel, John) see Curtis, Morton L., 91i:15003

Johnson, Charles Royal Positive definite completions: a guide to selected literature. 91i:15002

(Li, Qiao) see Brualdi, Richard A., (Not in MR)

(Place, Paul) see Curtis, Morton L., 91i:15003

Items with secondary classifications in 15-02

Janczewicz, Bernard ★ Multivectors and Clifford algebra in electrodynamics. 91b:15031

## 15-03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 15-03

Aleksandrova, N. V. (with Turpanova, V. M.) The concept of linear independence. (Russian. English summary) 91h:01038

Farshall, Karen V. Hunger Toward a history of nineteenth-century invariant theory. 91b:01049

Taranovskaya, T. D. The theory of determinants in the papers of Russian mathematicians of the 19th century. (Russian. English summary) 91g:01022

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 Ragab, F. Z. (with Emann, E. G.) On fuzzy matrices. (Not in MR)  
 Richmond, A. N. Expansions for the exponential of a sum of matrices. 91c:15018  
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- Shavokhina, N. S. *see* Chernikov, N. A., 91c:15027  
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 Waters, Steven R. *see* Hill, Richard D.; et al., 91b:15037  
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 Yan, Chun Gang (with Jiang, Chang Jun) Some kinds of multiplication of matrices. (Chinese. English summary) (Not in MR)  
 Yang, Hai Tao A new definition of fuzzy vector spaces. (Chinese. English summary) 91c:15019

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- Bali, Joseph A. (with Gohberg, Israel; Rodman, Leiba) Two-sided Nudel'man interpolation problems for rational matrix functions. 91g:30040  
 — (with Gohberg, Israel; Rodman, Leiba) Common minimal multiples and divisors for rational matrix functions. 91f:15051  
 Beezer, Robert A. A disrespected polynomial. 91f:05003  
 Bekbaev, U. D. Some results connected with differential vector spaces. (Russian) 91c:20096  
 Berens, H. (with Finzel, M.) Addendum: "A continuous selection of the metric projection in matrix spaces" [in *Numerical methods of approximation theory*, Vol. 8 (Oberwolfach, 1986), 21–29, Birkhäuser, Basel, 1987; MR 90i:41040]. 91c:41039  
 Bhandari, Subir Kumar Multivariate majorization and directional majorization; positive results. 91k:15036  
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 Burtseva, T. A. (with Shestyreva, L. V.) Affine planes over skew fields. (Russian) (Not in MR)  
 Buslowicz, Mikolaj Comments on: "Stability analysis of interval matrices: improved bounds" [Internat. J. Control 48 (1988), no. 6, 2265–2273; MR 89m:93075] by Dj. B. Petkovski. 91d:33068  
 Dai, Hua Numerically stable construction of real symmetric band matrices from spectral data. 91h:65065  
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 Jones, John R. Stationary solutions of nonlinear matrix differential equations. 91b:34008  
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 Loewy, Raphael Linear maps which preserve a balanced nonsingular inertia class. 91f:15009  
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 Shi, Kai Quan  $A(\otimes)$  matrices and their grey characteristics. 91h:93043  
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 Weichsel, Paul M. Distance-regular graphs in block form. 91d:05070  
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#### Items with secondary classifications in 16–01

- (Artin, Emil) *see* van der Waerden, B. L., 91h:00009a and 91h:00009b  
 (Blum, Fred) *see* van der Waerden, B. L., 91h:00009a  
 Eisenreich, Günther  $\star$  Lexikon der Algebra. (German) [Lexicon of algebra] 91i:00005  
 (Noether, Emmy) *see* van der Waerden, B. L., 91h:00009a and 91h:00009b  
 (Schubert, John R.) *see* van der Waerden, B. L., 91h:00009a and 91h:00009b  
 van der Waerden, B. L.  $\star$  Algebra. Vol. I. 91h:00009a  
 —  $\star$  Algebra. Vol. II. 91h:00009b  
 Warner, Seth  $\star$  Modern algebra. 91g:00003

#### 16–02 Research exposition (monographs, survey articles)

- Goodearl, K. R. (with Warfield, Robert B., Jr.)  $\star$  An introduction to noncommutative Noetherian rings. 91c:16001  
 Karpilovsky, Gregory  $\star$  Unit groups of group rings. 91h:16001  
 —  $\star$  Clifford theory for group representations. 91h:16002  
 —  $\star$  Induced modules over group algebras. 91h:16001  
 —  $\star$  Symmetric and  $G$ -algebras. 91h:16003  
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#### Items with secondary classifications in 16–02

- Jensen, Christian U. (with Lenzing, Helmut)  $\star$  Model-theoretic algebra with particular emphasis on fields, rings, modules. 91m:03038  
 Lenzing, Helmut *see* Jensen, Christian U., 91m:03038  
 Passman, Donald S.  $\star$  A course in ring theory. 91m:16001

#### 16–03 Historical (must also be assigned at least one classification number from Section 01)

##### Items with secondary classifications in 16–03

- Altmann, Simon L. Hamilton, Rodrigues, and the quaternion scandal. 91c:01027  
 Amitsur, S. A. Highlights in the history of finite-dimensional central division algebras. 91g:01024  
 (Hamilton, William Rowan) *see* Altmann, Simon L., 91c:01027  
 Jacobson, Nathan  $\star$  Collected mathematical papers. Vol. 1. 91b:01095a  
 —  $\star$  Collected mathematical papers. Vol. 2. 91b:01095b  
 —  $\star$  Collected mathematical papers. Vol. 3. 91b:01095c  
 (Rodrigues, Olinde) *see* Altmann, Simon L., 91c:01027

#### 16–04 Explicit machine computation and programs (not the theory of computation or programming)

##### Items with secondary classifications in 16–04

- Gatav-Ivanova, Tatiana Algorithmic determination of the Jacobson radical of monomial algebras. 91d:68058  
 Larson, Richard G. Hopf algebras via symbolic algebra. 91d:16072  
 Stevens, Rick *see* Wang, Tie Cheng, 91a:68243  
 Wang, Tie Cheng (with Stevens, Rick) Solving open problems in right alternative rings with  $Z$ -module reasoning. 91a:68243

#### 16–06 Proceedings, conferences, collections, etc.

- (Barrett, Wayne) *see* Proceedings: Conference of the International Linear Algebra Society, 91m:16002  
 (Gago Couso, Felipe) *see* Algebra and geometry, 91b:16002  
 (Hershkowitz, Daniel) *see* Proceedings: Conference of the International Linear Algebra Society, 91m:16002  
 (Jain, Surender Kumar) *see* Noncommutative ring theory, 91h:16004  
 (Koshitani, Shigeo) *see* Proceedings: Symposium on Ring Theory, 91m:16003  
 (López-Permouth, S. R.) *see* Noncommutative ring theory, 91h:16004  
 (Robinson, Donald W.) *see* Proceedings: Conference of the International Linear Algebra Society, 91m:16002  
 (Villanueva Nóvoa, Emilio) *see* Algebra and geometry, 91b:16002

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- Algebra and geometry  $\star$  Algebra and geometry. 91h:16002  
 Álgebra  $\star$  Algebra and geometry. 91h:16002  
 Athens, OH  $\star$  Noncommutative ring theory. 91h:16004  
 Chiba  $\star$  Proceedings of the 23rd Symposium on Ring Theory. 91m:16003  
 Conference:

- International Linear Algebra Society  $\star$  Proceedings of the First Conference of the International Linear Algebra Society. 91m:16002  
 Noncommutative Ring Theory  $\star$  Noncommutative ring theory. 91h:16004  
 Hopf algebras  $\star$  Hopf algebras. 91k:16001  
 Lecture Notes in Mathematics  $\star$  Noncommutative ring theory. 91h:16004  
 Noncommutative ring theory  $\star$  Noncommutative ring theory. 91h:16004

##### Proceedings:

- Conference of the International Linear Algebra Society  $\star$  Proceedings of the First Conference of the International Linear Algebra Society. 91m:16002  
 Symposium on Ring Theory  $\star$  Proceedings of the 23rd Symposium on Ring Theory. 91m:16003

- Provo, UT  $\star$  Proceedings of the First Conference of the International Linear Algebra Society. 91m:16002

- Santiago de Compostela  $\star$  Algebra and geometry. 91b:16002

##### Special Issue:

- Hopf algebras  $\star$  Hopf algebras. 91k:16001

##### Symposium:

- Algebra and Geometry  $\star$  Algebra and geometry. 91h:16002

## 16–XX Associative rings and algebras {For the commutative case, see 13–XX.}

### 16–01 Instructional exposition (textbooks, tutorial papers, etc.)

- Blyth, T. S.  $\star$  Module theory. 91i:16001  
 Passman, Donald S.  $\star$  A course in ring theory. 91m:16001

## Symposium: (cont'd.)

Ring Theory ★ Proceedings of the 23rd Symposium on Ring Theory. 91m:16003

## Items with secondary classifications in 16-06

(Choban, M. M.) *see* Topological algebra, 91b:00053

(Michler, Gerhard O.) *see* Representation theory of finite groups and finite-dimensional algebras, 91m:20005

(Ringel, Claus Michael) *see* Representation theory of finite groups and finite-dimensional algebras, 91m:20005

## Items listed otherwise than by author

Bielefeld ★ Representation theory of finite groups and finite-dimensional algebras. 91m:20005

## Conference:

Representation Theory of Finite Groups and Finite-dimensional Algebras ★ Representation theory of finite groups and finite-dimensional algebras. 91m:20005

Progress in Mathematics ★ Representation theory of finite groups and finite-dimensional algebras. 91m:20005

Representation theory of finite groups and finite-dimensional algebras ★ Representation theory of finite groups and finite-dimensional algebras. 91m:20005

Topological algebra ★ Топологическая алгебра. (Russian) [Topological algebra] 91b:00053

## 16A21 Radical theory (1985)

Beattie, Margaret (with Stewart, Patrick) Graded versions of radicals. (*see* 91b:16002)

Stewart, Patrick *see* Beattie, Margaret, 91b:16002

Trendelenburg, I. D. Radicals and radical closures in differential rings. (Not in MR)

## 16A35 Artinian rings (1985)

Kolikov, K. Kh. Regular crossed products of groups and rings. (Russian) (Not in MR)

## Items with secondary classifications in 16A35

Yang, Wen Qi An extension of primary factorization and its application. (Chinese) (Not in MR)

## 16A50 Projective and flat modules and generalizations (1985)

Esterhuysen, A. Weakly projective coverings for left  $R$ -modules. (Afrikaans. English summary) (Not in MR)

## 16A52 Injective modules, self-injective rings and generalizations (1985)

Koirala, S. P. *see* Pandeya, B. M., (Not in MR)

Pandeya, B. M. (with Koirala, S. P.) A note on module modules. (Not in MR)

## 16A53 Special types of modules (1985)

## Items with secondary classifications in 16A53

Herzog, Ivo (with Rothmaler, Philipp) Modules with regular generic types. (*see* 91a:03077)

Rothmaler, Philipp *see* Herzog, Ivo, (91a:03077)

## 16A66 Ideal theory, prime ideals and their generalizations (1985)

Madgerova, Andreana S. On the description of the polynomial ideals. (Not in MR)

## 16A70 Commutativity theorems (1985)

Ashraf, Mohd. *see* Quadri, Murtaza A., (Not in MR)

Quadri, Murtaza A. (with Ashraf, Mohd.) A remark on a commutativity condition for rings. (Not in MR)

## 16A99 Miscellaneous topics (1985)

Lai, Sunder Examples: new from old. III. (Not in MR)

## 16Bxx General and miscellaneous

## 16B50 Category-theoretic methods and results (except as in 16D90, 16E10) [see also 18-XX]

## Items with secondary classifications in 16B50

Assem, Ibrahim (with Skowroński, Andrzej) Algèbres pré-inclinées et catégories dérivées. [Pretilted algebras and derived categories] 91d:16019

— (with Skowroński, Andrzej) Quadratic forms and iterated tilted algebras. 91d:16020

Skowroński, Andrzej *see* Assem, Ibrahim, 91d:16019 and 91d:16020

Whelan, E. A. Corrigendum and addendum: "An infinite construction in ring theory" [Glasgow Math. J. 30 (1988), no. 3, 349–357; MR 89i:16018]. 91j:16037

Xu, Yong Hua<sup>1</sup> An equivalence between ring  $F$  and infinite matrix subring over  $F$ . (Chinese summary) 91d:16011

## 16B99 None of the above, but in this section

## Items with secondary classifications in 16B99

Feigelstock, Shalom The additive groups of fisible rings. (Not in MR)

Heatherly, Henry Adjoint groups and semigroups of rings. 91i:20055

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Raianu, Șerban *see* Năstăsescu, Constantin, 91c:16032

## 16Dxx Modules, bimodules and ideals

## 16D10 General module theory

Dragomir, Sever Silvestru Representation of linear forms on modules endowed with semi-subinner products. 91m:16004

Facchini, Alberto (with Salce, Luigi) Uniserial modules: sums and isomorphisms of subquotients. 91b:16005

Salce, Luigi *see* Facchini, Alberto, 91b:16005

## 16D15 1-sided ideals

Chatters, A. W. Serial rings with Krull dimension. 91d:16001

Chen, Jian Long *see* Tang, Hual Ding, (Not in MR)

Mazurek, R. (with Puczyłowski, Edmund R.) On nilpotent elements of distributive rings. 91b:16003

Puczyłowski, Edmund R. *see* Mazurek, R., 91b:16003

Tang, Hual Ding (with Chen, Jian Long) On left  $A$ -injective rings. (Chinese. English summary) (Not in MR)

## Items with secondary classifications in 16D15

Andrunakievich, A. V. Right ideals of rings that are close to von Neumann right ideals. (Russian) 91d:16012

— *see also* Andrunakievich, V. A., 91d:16013

Andrunakievich, V. A. (with Andrunakievich, A. V.) Regularity of a ring with respect to right ideals. 91d:16013

Chatters, A. W. (with Xue, Wei Min<sup>2</sup>) On right duo p.p. rings. 91d:16008

Tuganbaev, A. A. Distributive rings and modules. 91b:16005

Xue, Wei Min<sup>2</sup> *see* Chatters, A. W., 91d:16008

## 16D20 Bimodules

Kasch, Friedrich The total in the category of modules. 91f:16001

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## Items with secondary classifications in 16D20

Birkenmeier, Gary F. Split-null extensions of strongly right bounded rings. 91g:16021

Smalø, Sverre O. Functorial finite subcategories over triangular matrix rings. 91f:16016

Warfield, Robert B., Jr. Bond invariance of  $G$ -rings and localization. 91d:16040

Wisbauer, Robert Injectivity and cogenerator properties of a ring as bimodule. 91k:16006

## 16D25 2-sided ideals

Bessenrodt, Christine (with Törner, Günter) On two-sided right ideals in chain domains. 91f:16002

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Xue, Wei Min<sup>2</sup> On weakly left duo rings. 91f:16003

## Items with secondary classifications in 16D25

Birkenmeier, Gary F. Split-null extensions of strongly right bounded rings. 91g:16021

Boridi, A. A. (with Kolikov, K. Kh.) Lie nilpotency and ideals of crossed products. (Russian) 91g:16018

Chatters, A. W. (with Xue, Wei Min<sup>2</sup>) On right duo p.p. rings. 91d:16008

Kolikov, K. Kh. *see* Boridi, A. A., 91g:16018

Xue, Wei Min<sup>2</sup> *see* Chatters, A. W., 91d:16008

## 16D30 Maximal and prime 2-sided ideals [see also 16N60, 16D60], simple rings (except as in 16Kxx)

Birkenmeier, Gary F. (with Heatherly, Henry) Medial rings and an associated radical. 91h:16006

Dean, Andrew Paul (with Zorzitto, F. A.) A criterion for pure simplicity. 91g:16001

Ferrero, Miguel (with Matczuk, J.) Prime ideals in skew polynomial rings of derivation type. 91h:16007

— Prime and principal closed ideals in polynomial rings. 91h:16008

Heatherly, Henry *see* Birkenmeier, Gary F., 91h:16006

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Chen, Cao Yu The Connes spectrum of certain finite nonabelian groups. 91f:16038

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Heinicke, A. G. Intermediate subrings of normalizing extensions: is there an "incomparability theorem"? 91j:16039

Kang, Ming Chang Constructions of Brauer-Severi varieties and norm hypersurfaces. 91h:12006



- Mason, Gordon Prime ideals and quotient rings of reduced rings. 91d:16066  
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 Voskoglou, Michael G. Prime ideals of skew polynomial rings. 91h:16035  
 Warfield, Robert B., Jr. Bond invariance of  $G$ -rings and localization. 91d:16040

### 16D40 Free, projective, and flat modules and ideals [see also 18G05, 19A13]

- Alonley, M. R. *see* Singh, Rama Shankar, (Not in MR)  
 Asensio Mayor, J. (with Martínez Hernández, J.) Monomorphic flat envelopes in commutative rings. 91k:16002  
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 Bindařová, Renata *see* Bican, Ladislav, 91m:16005  
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 Fleischmann, Peter Projective simple modules of symmetric algebras and their specializations with applications to Hecke algebras. 91h:16003  
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 Masuoka, Akira Corings and invertible bimodules. 91a:16001  
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 McConnell, John Coulter (with Robson, J. C.) The Nullstellensatz and generic flatness. 91d:16002  
 Mohammed, Ali (with Sandomierski, Frank L.) Complements in projective modules. 91d:16003  
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 — (with Srivastava, Renu) On coflat modules. I. 91k:16005  
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 Xue, Wei Min<sup>2</sup> On PP rings. 91h:16007

### Items with secondary classifications in 16D40

- Albrecht, Ulrich Locally  $A$ -projective abelian groups and generalizations. 91c:20082  
 Baba, Yoshitomo (with Harada, Manabu) On almost  $M$ -projectives and almost  $M$ -injectives. 91e:16006  
 Chatters, A. W. (with Xue, Wei Min<sup>2</sup>) On right duo p.p. rings. 91d:16008  
 Dlab, Vlastimil (with Ringel, Claus Michael) Filtrations of right ideals related to projectivity of left ideals. 91e:16052  
 Harada, Manabu *see* Baba, Yoshitomo, 91e:16006  
 Krylov, P. A. On modules with hereditary endomorphism rings. 91m:16011  
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 Wolfson, Kenneth G. The endomorphism ring of a free module over a principal left ideal domain. 91e:16033  
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### 16D50 Injective modules, self-injective rings [see also 16L60, 18G05]

- Baba, Yoshitomo Note on almost  $M$ -injectives. 91d:16004  
 Bharadwaj, P. C. (with Tripathi, A. M.) On ICP-injective modules. 91f:16004  
 Busqué, Claude Two-sided ideals in right self-injective regular rings. 91j:16002  
 Dinh Van Huynh (with Nguyễn Việt Dũng<sup>2</sup>) Rings with restricted injective condition. 91d:16005  
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 Kucera, T. G. Explicit descriptions of injective envelopes: generalizations of a result of Northcott. 91e:16005  
 Nguyễn Việt Dũng<sup>2</sup> *see* Dinh Van Huynh, 91d:16005  
 Osófsky, Barbara L. Injective modules over twisted polynomial rings. 91k:16004  
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- Wisbauer, Robert Injectivity and cogenerator properties of a ring as bimodule. 91k:16006  
 Xiao, Jie<sup>2</sup> Indecomposable modules of representation-finite self-injective algebras of class  $D_n$ . I. Two-corned algebras. (Chinese) 91f:16005  
 — Indecomposable modules of representation-finite self-injective algebras of class  $D_n$ . II. Three-corned algebras. (Chinese) 91f:16006  
 Yue Chi Ming, Roger On self-injective and quasi-Frobeniusian rings. (Italian summary) 91m:16006

### Items with secondary classifications in 16D50

- Alonley, M. R. *see* Singh, Rama Shankar, (Not in MR)  
 Asensio Mayor, J. (with Martínez Hernández, J.) Monomorphic flat envelopes in commutative rings. 91k:16002  
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#### 16Y99 None of the above, but in this section

- Abd-Allah, Ahmed M. (with Abdallah, M. E.-G. M.) Categories of generalized rings associated with partial mappings. 91f:16063  
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 — (with Groenewald, N. J.) Almost nilpotent gamma rings. 91b:16058  
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Workshop:

Quantum Groups ★ Quantum groups. 91m:17024

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- Kur'min, E. N. (with Shestakov, I. P.) Nonassociative structures. (Russian) 91b:17001  
 Shestakov, I. P. *see* Kur'min, E. N., 91b:17001

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- Gorbatshevich, V. V. *see* Vinberg, E. B.; et al., 91j:17004  
 Onishchik, A. L. *see* Vinberg, E. B.; et al., 91j:17004  
 Vinberg, E. B. (with Gorbatshevich, V. V.; Onishchik, A. L.) Structure of Lie groups and Lie algebras. (Russian) 91j:17004

### 17-03 Historical (must also be assigned at least one classification number from Section 01)

- Boseck, Helmut Zur Entwicklung der Lie-Theorie. [On the evolution of Lie theory] 91g:17001

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- Hawkins, Thomas ① Episodes in the origins of the representation theory of Lie algebras. 91f:01014  
 Helgason, Sigurdur A centennial: Wilhelm Killing and the exceptional groups. 91k:01006 (Killing, Wilhelm) *see* Helgason, Sigurdur, 91k:01006

### 17-04 Explicit machine computation and programs (not the theory of computation or programming)

- Apel, J. (with Lassner, W.) An extension of Buchberger's algorithm and calculations in enveloping fields of Lie algebras. 91g:17002  
 Cecchini, R. (with Tarlini, Marco) Symbolic superalgebra manipulations using COMMON LISP. 91g:17003  
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- Grayson, Matthew (with Grossman, Robert) Vector fields and nilpotent Lie algebras. (see 91f:00012)  
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### 17-06 Proceedings, conferences, collections, etc.

- (Benkart, Georgia) *see* Lie algebras and related topics, 91g:17004  
 (Osborn, J. Marshall) *see* Lie algebras and related topics, 91g:17004

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Conference:

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 (Gamskrelidze, R. V.) *see* Current problems in mathematics. Fundamental directions, 91b:22001  
 (Gelfand, S. I.) *see* Topics in representation theory, 91m:22002  
 (Kirillov, A. A.) *see* Topics in representation theory, 91m:22002  
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- Kantor, I. L. A universal conservative algebra. 91m:17001  
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Items with secondary classifications in 17A01

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### 17A15 Noncommutative Jordan algebras

- Skosyrskii, V. G. Strongly prime noncommutative Jordan algebras. (Russian) 91b:17001  
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- Benslimane, M. (with Jaa, O.; Kaldi, El Amin Mokhtar) The socle and the largest spectrum finite ideal. 91m:46075  
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### 17A20 Flexible algebras

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- Eakin, Paul (with Sathaye, Avinash) On automorphisms and derivations of Cayley-Dickson algebras. 91b:17002  
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 — (with Mallol, Cristian) Dérivations dans les algèbres gamétiques. IV. [Derivations in genetic algebras. IV] 91d:17049  
 — (with Zitan, Fouad) Automorphismes d'une algèbre de Bernstein. [Automorphisms of a Bernstein algebra] 91k:17040  
 — (with Koulibaly, Akry) Les algèbres de Lotka-Volterra. [Lotka-Volterra algebras] 91k:17041  
 — (with Ouattara, Moussa) Sur les algèbres de Jordan génétiques. II. [On genetic Jordan algebras. II] 91m:17049  
 — see also Chevalet, Claude; et al., 91f:17038 and Katambe, Issoufou; et al., 91f:17039  
 Odoni, R. W. K. (with Stratton, A. E.) Structure of Bernstein algebras. 91e:17032  
 Ouattara, Moussa Sur les  $T$ -algèbres de Jordan. (English summary) [On Jordan  $T$ -algebras] 91j:17058  
 — see also Micali, Artibano, 91m:17049  
 Peresi, Luiz Antonio see Hentzel, Irvin Roy; et al., 91k:17039  
 Singh, D. K. see Singh, M. K., 91d:17050  
 Singh, M. K. (with Singh, D. K.) Certain train algebras whose elements of weight one are periodic. 91d:17050  
 Stratton, A. E. see Odoni, R. W. K., 91e:17032  
 Zitan, Fouad see Micali, Artibano, 91k:17040

## 17D99 None of the above, but in this section

- De Salvo, M. On the algebra associated with a finite hypergroupoid. (Italian. English summary) 91a:17045  
 Kantor, I. L. A universal attracting object in the category of conservative algebras. (Russian) 91d:17051

Items with secondary classifications in 17D99

- Ėlašvili, A. G. Algebras with an irreducible group of automorphisms. (Russian) 91a:17010  
 Koirakh, L. A. Gauge theory of strings and  $\mathcal{B}$ -algebra. 91e:17027

## 18-XX Category theory, homological algebra

### 18-01 Instructional exposition (textbooks, tutorial papers, etc.)

Items with secondary classifications in 18-01

- Khelemskii, A. Ya. ★ Банаховы и полинормированные алгебры: общая теория, представления, гомологии. (Russian) [Banach and polynormed algebras: general theory, representations, homology] 91h:46001

### 18-02 Research exposition (monographs, survey articles)

- Adámek, Jiří (with Herrlich, Horst; Strecker, George E.) ★ Abstract and concrete categories. 91h:18001  
 Herrlich, Horst see Adámek, Jiří; et al., 91h:18001  
 Strecker, George E. see Adámek, Jiří; et al., 91h:18001

Items with secondary classifications in 18-02

- Eckhardt, Ulrich Anwendung der digitalen Topologie in der Binärbildverarbeitung. (English summary) [Application of digital topology in the processing of binary images] 91a:68273

### 18-03 Historical (must also be assigned at least one classification number from Section 01)

- Mac Lane, Saunders The development of mathematical ideas by collision: the case of categories and topos theory. 91e:18001

### 18-06 Proceedings, conferences, collections, etc.

Items with secondary classifications in 18-06

- (Banaschewski, Bernhard) see Special Issue: In honor of Bernhard Banaschewski, 91h:00033  
 (Inassaridze, Kh. N.) see  $K$ -theory and homological algebra, 91h:19001  
 (Nelson, Evelyn M.) see Special Issue: In honor of Bernhard Banaschewski, 91h:00033

Items listed otherwise than by author

Birthday:

- Banaschewski, Bernhard ★ Special issue in honor of B. Banaschewski. 91h:00033

Conference:

- Topology ★ IV Convegno di Topologia. [Fourth Conference on Topology] 91m:00028

$K$ -theory and homological algebra ★  $K$ -theory and homological algebra. 91h:19001

Lecture Notes in Mathematics ★  $K$ -theory and homological algebra. 91h:19001

Seminar:

- Algebra ★  $K$ -theory and homological algebra. 91h:19001

Sorrento ★ IV Convegno di Topologia. [Fourth Conference on Topology] 91m:00028

Special Issue:

- In honor of Bernhard Banaschewski ★ Special issue in honor of B. Banaschewski. 91h:00033

Tbilisi ★  $K$ -theory and homological algebra. 91h:19001

## 18Axx General theory of categories and functors

### 18A10 Graphs, diagram schemes, precategories, neocategories [see also 20Lxx]

Items with secondary classifications in 18A10

- Johnstone, Peter T. Affine categories and naturally Mal'cev categories. 91c:18009  
 Leila, S. K. Categorical abstract data type (CADT). 91a:68194  
 Walters, R. F. C. The free category with products on a multigraph. 91a:18003

### 18A15 Foundations, relations to logic and deductive systems [see also 03-XX]

- Adámek, Jiří see Rosický, Jiří; et al., 91a:18001  
 Rosický, Jiří (with Trnková, Věra; Adámek, Jiří) Unexpected properties of locally presentable categories. 91a:18001  
 Trnková, Věra see Rosický, Jiří; et al., 91a:18001

Items with secondary classifications in 18A15

- Hardin, Thérèse Confluence results for the pure strong categorical logic CCL.  $\lambda$ -calculi as subsystems of CCL. 91h:03021  
 Lambek, J. On some connections between logic and category theory. 91h:03126  
 Pitts, Andrew M. (with Taylor, Paul) A note on Russell's paradox in locally Cartesian closed categories. 91k:03018  
 Taylor, Paul see Pitts, Andrew M., 91k:03018

### 18A20 Epimorphisms, monomorphisms, special classes of morphisms, null morphisms, factorization (bicategories)

- Ball, Richard N. (with Hager, Anthony W.; Macula, Anthony J.) An  $\alpha$ -disconnected space has no proper monic preimage. 91m:18001  
 Castellani, Gabriele Compact objects, surjectivity of epimorphisms and compactifications. (French summary) 91k:18001  
 Dragomir, Anca-Dana  $\mathcal{L}$ -morphisms in exact categories. 91h:18001  
 Hager, Anthony W. see Ball, Richard N.; et al., 91m:18001  
 Macula, Anthony J. see Ball, Richard N.; et al., 91m:18001

Items with secondary classifications in 18A20

- Adámek, Jiří (with Herrlich, Horst; Strecker, George E.) ★ Abstract and concrete categories. 91h:18001  
 Anghel, Constantin Semi-initial and semi-final  $V$ -functors. 91h:18008  
 — Lifting properties of  $V$ -functors. 91h:18009  
 Ball, Richard N. (with Hager, Anthony W.) Characterization of epimorphisms in Archimedean lattice-ordered groups and vector lattices. (see 91h:06017)  
 Bhatti, Shaban Ali (with Chaudhry, Muhammad Anwar) Monomorphisms and epimorphisms in the category of BCI-algebras. 91h:06036  
 Böger, Reinhard Multicoreflective subcategories and coprime objects. 91a:18004  
 Chaudhry, Muhammad Anwar see Bhatti, Shaban Ali, 91h:06036  
 Hager, Anthony W. see Ball, Richard N., (91h:06017)  
 Herrlich, Horst see Adámek, Jiří; et al., 91h:18001  
 Schwarz, Friedhelm Representability of partial morphisms in topological and monotopological constructs. 91k:54016  
 Strecker, George E. see Adámek, Jiří; et al., 91h:18001

### 18A22 Special properties of functors (faithful, full, etc.)

- Herrlich, Horst Functors lifting limits. 91j:18001  
 Rafael, M. D. Separable functors revisited. 91g:18001



Vázquez, Roberto Saturations and factorizations with respect to a functor. (Spanish) 91a:18002

### 18A25 Functor categories, comma categories

Dzhanelidze, G. Yu. Cohomology and extensions of internal modules. 91j:18002  
Dzhanelidze, M. A. Coefficients for cohomology of "large" categories. 91j:18003

Items with secondary classifications in 18A25

Carboni, Aurelio Categories of affine spaces. 91c:18008  
Smalá, Sverre O. Functorial finite subcategories over triangular matrix rings. 91f:16016

### 18A30 Limits and colimits (products, sums, directed limits, pushouts, fiber products, equalizers, kernels, ends and coends, etc.)

Botnaru, D. V. Functor identities. (Russian) 91m:18002  
Pare, Robert Simply connected limits. 91j:18004  
Walters, R. F. C. The free category with products on a multigraph. 91a:18003

Items with secondary classifications in 18A30

Adámek, Jiří *see* Rosický, Jiří; et al., 91a:18001  
Botnaru, D. V. Quasi-identity and identity in the category of dynamics. 91d:18004  
Chan, Khuen *see* Smirnov, V. A.<sup>2</sup>, 91g:46082  
Durán, Ana Lía Existence of coproducts in the category of compact topological groups. (Spanish. English summary) 91c:22001  
Günther, Bernd Semigroup structures on derived limits. 91m:55009  
Heath, Philip R. Lifting amalgams and other colimits of monoids. 91b:20081  
Kasangian, Stefano (with Walters, R. F. C.) The duality between flow charts and circuits. 91j:68033  
Peš, Vladimír Representation of semigroups by products of simple graphs. 91c:05185  
Rosický, Jiří (with Trnková, Věra; Adámek, Jiří) Unexpected properties of locally presentable categories. 91a:18001  
Šťapal, Josef On the direct power of relational systems. (Russian summary) 91c:08002  
Smirnov, V. A.<sup>2</sup> (with Chan, Khuen) On the functor Ext in the category of linear topological spaces. 91g:46082  
Trnková, Věra *see* Rosický, Jiří; et al., 91a:18001  
Wagner, Eric G. All recursive types defined using products and sums can be implemented using pointers. 91m:68127  
Walters, R. F. C. *see* Kasangian, Stefano, 91j:68033

### 18A32 Factorization of morphisms (via images, coimages, dominions, codominions), substructures, quotient structures, congruences, amalgams

Dikranjan, Dikran N. (with Giuli, Eraldo; Tholen, Walter) Closure operators. II. 91a:18002  
Giuli, Eraldo *see* Dikranjan, Dikran N.; et al., 91a:18002  
Tholen, Walter *see* Dikranjan, Dikran N.; et al., 91a:18002  
Zarichnyi, M. M. Groups of automorphisms and factorization of normal functors. (Ukrainian. Russian summary) (Not in MR)

Items with secondary classifications in 18A32

Rhodes, John (with Weil, Pascal) Decomposition techniques for finite semigroups, using categories. I, II. 91e:20043  
Vázquez, Roberto Saturations and factorizations with respect to a functor. (Spanish) 91a:18002  
Weil, Pascal *see* Rhodes, John, 91e:20043

### 18A35 Categories admitting limits (complete categories), functors commuting with limits, continuous functors, completions

Aczel, Peter (with Mendler, Nax) A final coalgebra theorem. 91f:18001  
Adámek, Jiří (with Herrlich, Horst; Reiterman, Jan) Cocompleteness almost implies completeness. 91j:18005  
Herrlich, Horst *see* Adámek, Jiří; et al., 91j:18005  
Mendler, Nax *see* Aczel, Peter, 91f:18001  
Preuss, Gerhard Nets and graphs as final completions and the relations between them. 91m:18003  
Reiterman, Jan *see* Adámek, Jiří; et al., 91j:18005  
Solian, Alexandru (with Viswanathan, T. M.) Pluri-adjoints and preservation of finite limits. 91h:18002  
Viswanathan, T. M. *see* Solian, Alexandru, 91h:18002

Items with secondary classifications in 18A35

Adámek, Jiří Corrigendum: "How complete are categories of algebras?" [Bull. Austral. Math. Soc. 36 (1987), no. 3, 389–409; MR 89a:18010]. 91m:18012  
— *see also* Rosický, Jiří; et al., 91a:18001  
Börger, Reinhard Multicoreflective subcategories and coprime objects. 91a:18004  
Herrlich, Horst Functors lifting limits. 91j:18001  
Pare, Robert Simply connected limits. 91j:18004  
Rosický, Jiří (with Trnková, Věra; Adámek, Jiří) Unexpected properties of locally presentable categories. 91a:18001  
Trnková, Věra *see* Rosický, Jiří; et al., 91a:18001

### 18A40 Adjoint functors (representable functors, universal constructions, reflective subcategories, reflections, etc.), constructions of adjoints (Kan extensions, etc.)

Börger, Reinhard Multicoreflective subcategories and coprime objects. 91a:18004  
— (with Tholen, Walter) Total categories and solid functors. 91b:18002  
Choe, Tae Ho A dual adjointness on partially ordered topological spaces. 91m:18004  
Dimov, Georgi D. (with Tholen, Walter) A characterization of representable dualities. 91c:18003  
Fleischer, Isidore Preservation of bi-endomorphic composition by categorical reflection. 91b:18003  
Heath, Philip R. (with Kamps, Klaus Heiner) Lifting colimits of (topological) groupoids and (topological) categories. 91d:18001  
Hulek, Miroslav Categories and mathematical morphology. 91e:18004  
Kamps, Klaus Heiner *see* Heath, Philip R., 91d:18001  
Kelly, G. M. (with Lawvere, F. W.) On the complete lattice of essential localizations. 91c:18001  
Lawvere, F. W. *see* Kelly, G. M., 91c:18001  
Pursh, Hans-E. Separation in free algebras over Top and k-Top. 91d:18002  
Tholen, Walter *see* Börger, Reinhard, 91b:18002 and Dimov, Georgi D., 91c:18003

Items with secondary classifications in 18A40

Anghelescu, Constantin Semi-initial and semi-final  $V$ -functors. 91b:18008  
— Lifting properties of  $V$ -functors. 91b:18009  
Ball, Richard N. (with Hager, Anthony W.) Epicompletion of Archimedean  $l$ -groups and vector lattices with weak unit. 91g:06016  
Bentley, H. L. (with Herrlich, Horst; Lowen-Colebunders, Eva) Convergence. 91k:54052  
Casacuberta, Carles (with Peschke, Georg; Pfenniger, Markus) Sur la localisation dans les catégories avec une application à la théorie de l'homotopie. (English summary) [On localization in categories with an application to homotopy theory] 91j:55014  
Dikranjan, Dikran N. (with Giuli, Eraldo; Tholen, Walter) Closure operators. II. 91a:18002  
Doncel Juárez, José Luis ★ Interpretaciones del cuarto grupo de cohomología de Eilenberg-Mac Lane. (Spanish) [Interpretations of the fourth Eilenberg-Mac Lane cohomology group] 91g:20077  
Giuli, Eraldo *see* Dikranjan, Dikran N.; et al., 91a:18002  
Hager, Anthony W. *see* Ball, Richard N., 91g:06016  
Herrlich, Horst *see* Bentley, H. L.; et al., 91k:54052  
Hulek, Miroslav (with Pumpün, Dieter) Disconnectedness. 91k:54013  
Ishii, Tadaashi A problem on the Tychonoff functor. 91j:54015  
Kashu, A. I. Basic functors on the category of modules and the lattice of submodules. II. (Russian) 91j:16004  
Lowen, Robert The shortest note on the smallest coreflective subcategories of TOP. 91a:54014  
Lowen-Colebunders, Eva *see* Bentley, H. L.; et al., 91k:54052  
Nakagawa, Ryosuke Categorical topology. 91c:54015  
Peschke, Georg *see* Casacuberta, Carles; et al., 91j:55014  
Pfenniger, Markus *see* Casacuberta, Carles; et al., 91j:55014  
Pumpün, Dieter *see* Hulek, Miroslav, 91k:54013  
Richter, Günther A characterization of the Stone-Čech compactification. 91d:18006  
del Río Mateos, Angel Bigraded bimodules. 91j:16054  
Sobral, Manuela Absolutely closed spaces and categories of algebras. 91m:18009  
Taylor, Paul Quantitative domains, groupoids and linear logic. 91f:68140  
Tholen, Walter *see* Dikranjan, Dikran N.; et al., 91a:18002  
Wagner, Eric G. Algebras, polynomials and programs. 91c:68086

### 18A99 None of the above, but in this section

Adámek, Jiří (with Strecker, George E.) Injectivity of topological categories. 91e:18005  
Léger, C. Le groupe des métamorphoses d'une catégorie, un exemple. [An example of the group of metamorphoses of a category] 91a:18005  
Salbany, Sergio Injective objects and morphisms. 91e:18006  
Schwarz, Friedhelm Description of the topological universe hull. 91j:18006  
— Extensionable topological hulls and topological universe hulls inside the category of pseudotopological spaces. 91j:18007  
Strecker, George E. *see* Adámek, Jiří, 91e:18005  
Tambara, Daisuke The Grothendieck ring of linear representations of a finite category. 91d:18003

Items with secondary classifications in 18A99

Bentley, H. L. (with Hunsaker, W. N.) Cauchy sequences in quasi-uniform spaces: categorical aspects. 91e:18013  
Colijn, Luc *see* Verschoren, Alain; et al., 91j:68125  
Dzhanelidze, G. Yu. Galois theory in categories: the new example of differential fields. 91h:12018  
Hunsaker, W. N. *see* Bentley, H. L., 91e:18013  
Lamarche, François A simple model of the theory of constructions. 91b:03030  
Lambek, J. Fixpoints revisited. 91b:18007  
Lin, Yi<sup>2</sup> (with Ma, Yonghao) System hierarchies with continuous linkage mappings. 91h:93003  
Ma, Yonghao *see* Lin, Yi<sup>2</sup>, 91h:93003  
Michler, Lothar Zu den halbgeordneten Kategorien der Abbildungen von Mengen auf Mengen. (English summary) [On the partially ordered categories of the mappings from sets onto sets] 91m:18011  
Nogueira, Maria Teresa A. D. On a characterization of finitely presented functors. 91h:16011  
Vermeir, Dirk *see* Verschoren, Alain; et al., 91j:68125  
Verschoren, Alain (with Vermeir, Dirk; Colijn, Luc) A category-theoretic framework for knowledge and learning. 91j:68125

## 18Bxx Special categories

## 18B10 Category of relations, additive relations

- Dekov, Deko V. Problèmes universels relatifs aux classes polaires des relations. [Universal problems involving polar classes of relations] 91k:18002
- Hoehnke, Hans-Jürgen On certain classes of categories and monoids constructed from abstract Mal'cev clones. I. 91m:18005
- Rebenciu, M. On binary nonhomogeneous relations in a category. II. (Romanian summary) (Not in MR)

Items with secondary classifications in 18B10

- Koubek, V. Finite-to-finite universal varieties of distributive double  $p$ -algebras. 91g:06011
- Representations in varieties of regular involution bands. 91j:20136

## 18B15 Embedding theorems, universal categories [see also 18E20]

- Makkai, Michael A theorem on Barr-exact categories, with an infinitary generalization. 91h:18003

Items with secondary classifications in 18B15

- Adámek, Jiří (with Strecker, George E.) Injectivity of topological categories. 91e:18005
- Goral'čik, P. (with Koubek, V.; Sichler, J.) Universal varieties of  $(0, 1)$ -lattices. 91h:06014
- Koubek, V. see Goral'čik, P.; et al., 91h:06014
- Schwarz, Friedhelm Description of the topological universe hull. 91j:18006
- Extensionable topological hulls and topological universe hulls inside the category of pseudotopological spaces. 91j:18007
- Sichler, J. see Goral'čik, P.; et al., 91h:06014
- Strecker, George E. see Adámek, Jiří, 91e:18005

## 18B20 Categories of machines, automata, operative categories [see also 03D05, 68Qxx]

- Adámek, Jiří (with Trnková, Věra) ★ Automata and algebras in categories. 91j:18008
- Botnaru, D. V. A category of dynamics. (Russian. French summary) 91a:18006
- Quasi-identity and identity in the category of dynamics. 91d:18004
- Trnková, Věra see Adámek, Jiří, 91j:18008

Items with secondary classifications in 18B20

- Abramsky, Samson A generalized Kahn principle for abstract asynchronous networks. 91h:68025
- Bahamonde Rionda, Antonio see Gonzalez Rodriguez, Fernando, 91h:68113
- Beauquier, Daniele (with Pin, Jean-Eric) Factors of words. 91f:68037
- Gonzalez Rodriguez, Fernando (with Bahamonde Rionda, Antonio) The topology of continuous partially additive monoids. (French summary) 91h:68113
- Hoare, C. A. R. Notes on an approach to category theory for computer scientists. 91f:68137
- Hyland, J. M. E. (with Robinson, Edmund; Rosolini, Giuseppe) Algebraic types in PER models. 91h:68128
- Montagna, Franco (with Sorbi, Andrea) Creativeness and completeness in recursion categories of partial recursive operators. 91d:03017
- Mulry, Philip S. Some connections between models of computation. 91a:68061
- Panangaden, Prakash (with Russell, James R.) A category-theoretic semantics for unbounded indeterminacy. 91h:68121
- Pin, Jean-Eric see Beauquier, Daniele, 91f:68037
- Quasthoff, Uwe (with Schüler, Axel) Cellular automata and symbolic dynamics. (see 91e:58083)
- Robinson, Edmund see Hyland, J. M. E.; et al., 91h:68128
- Rosolini, Giuseppe see Hyland, J. M. E.; et al., 91h:68128
- Russell, James R. see Panangaden, Prakash, 91h:68121
- Schüler, Axel see Quasthoff, Uwe, (91e:58083)
- Sorbi, Andrea see Montagna, Franco, 91d:03017
- Wells, Charles F. A generalization of the concept of sketch. 91d:68082

## 18B25 Topoi [see also 03G30]

- Adámek, Jiří (with Herrlich, Horst) A characterization of concrete quasitopoi by injectivity. 91m:18006
- Betti, Renato Change of base for locally internal categories. 91a:18007
- Bhatani, Kiran R. Stability of abelian groups in a topos of sheaves. 91m:18007
- Dupont, Pascal Rings and modules in a localic topos. 91c:18002
- Herrlich, Horst see Adámek, Jiří, 91m:18006
- Jibladze, Mamuka Geometric morphisms and indexed toposes. 91c:18003
- Johnstone, Peter T. Collapsed toposes as bitopological spaces. 91j:18002
- Joyal, André (with Moerdijk, Ieke) Toposes as homotopy groupoids. 91h:18004
- (with Moerdijk, Ieke) A completeness theorem for open maps. 91m:18008
- Kennison, John F. Pro-group actions and fundamental pro-groups. 91j:18009
- Moerdijk, Ieke Descent theory for toposes. 91b:18005
- see also Joyal, André, 91h:18004 and 91m:18008
- Tavakoli, Javad Tensor products of modules in a topos. 91e:18007
- On topologies in a topos. 91j:18003
- Ulrich, Karl-H. On the correspondence between gerbes and bouquets. 91j:18010

Items with secondary classifications in 18B25

- Blass, Andreas Classifying topoi and the axiom of infinity. 91a:03117
- Dubuc, Eduardo J. Topoi and (multisorted) higher-order intuitionistic logic. 91h:03090
- Ebrahimi, M. Mehdi Internal completeness and injectivity of Boolean algebras in the topos of  $M$ -sets. 91h:03102
- Ehrig, Hartmut see Herrlich, Horst, 91h:68072

- Herrlich, Horst (with Ehrig, Hartmut) The construct PRO of projection spaces: its internal structure. 91b:68072

- Hirayuki, Sato e-ccc: between ccc and topos—its expressive power from the viewpoint of data type theory. (Not in MR)

- Johnstone, Peter T. Collapsed toposes and Cartesian closed varieties. 91c:18007
- Joyal, André (with Tierney, Myles) Universal bundles in simplicial sheaves. 91j:18020
- Kawahara, Yasuo Pushout-complements and basic concepts of grammars in toposes. 91m:68113

- Lambek, J. On the sheaf of possible worlds. 91f:03128
- Lavendhomme, R. (with Lucas, Thierry Eugène; Reyes, Gonzalo E.) Formal systems for topos-theoretic modalities. 91f:03032

- Loiseau, Bruno Some higher-order properties of a natural number object in a topos. 91i:03127

- Lowen, Robert see Lowen-Colebunders, Eva, 91a:54015
- Lowen-Colebunders, Eva (with Lowen, Robert) Topological quasitopos hulls of categories containing topological and metric objects. (French summary) 91a:54015

- Lucas, Thierry Eugène see Lavendhomme, R.; et al., 91f:03032
- Mac Lane, Saunders The development of mathematical ideas by collision: the case of categories and topos theory. 91e:18001

- Makkai, Michael (with Paré, Robert) ★ Accessible categories: the foundations of categorical model theory. 91a:03118

- Moerdijk, Ieke (with Reyes, Gonzalo E.) ★ Models for smooth infinitesimal analysis. 91m:18017

- Mulry, Philip S. Categorical fixed point semantics. 91c:03049

- Mulvey, Christopher J. The maximality of filters. 91m:06022

- Paré, Robert see Makkai, Michael, 91a:03118

- Pedicchio, M. Cristina (with Vermeulen, J.) A remark on the "local character" condition. 91j:18017

- Reyes, Gonzalo E. see Lavendhomme, R.; et al., 91f:03032 and Moerdijk, Ieke, 91m:18017

- Robinson, Edmund (with Rosolini, Giuseppe) Colimit completions and the effective topos. 91f:03130

- Rosolini, Giuseppe see Robinson, Edmund, 91f:03130

- Schwarz, Friedhelm Description of the topological universe hull. 91j:18006

- Extensionable topological hulls and topological universe hulls inside the category of pseudotopological spaces. 91j:18007

- Sacci Cruciani, Rosanna Euclidean geometry with infinitesimals. (Italian summary) 91d:18012

- Tierney, Myles see Joyal, André, 91j:18020

- Vermeulen, J. see Pedicchio, M. Cristina, 91j:18017

- Zilber, Jorge C. Local analytic rings. (French summary) 91g:32009

## 18B30 Categories of topological spaces and continuous mappings [see also 54-XX]

- Botnaru, D. V. Free objects in reflexive subcategories. (Russian) 91d:18005
- Day, Brian J. Onto Gelfand maps: appendix to "Onto Gelfand transformations" [Cahiers Topologie Géom. Différentielle Catégoriques 28 (1987), no. 3, 227-234; MR 89e:18015]. (French summary) 91c:18004
- Dikranjan, Dikran N. (with Giuli, Eraldo) Compactness, minimality and closedness with respect to a closure operator. 91e:18008
- Fedorchuk, V. V. see Zarichnyi, M. M., 91g:18004
- Giuli, Eraldo see Dikranjan, Dikran N., 91e:18008
- Richter, Günther A characterization of the Stone-Čech compactification. 91d:18006
- Sarkhel, D. N. Closed-category spaces and measurability. 91j:18011
- Sobral, Manuela Absolutely closed spaces and categories of algebras. 91m:18009
- Wyler, Oswald On convergence of filters and ultrafilters to subsets. 91e:18009
- Zarichnyi, M. M. (with Fedorchuk, V. V.) Covariant functors in categories of topological spaces. (Russian) 91g:18004

Items with secondary classifications in 18B30

- Adámek, Jiří (with Herrlich, Horst; Strecker, George E.) ★ Abstract and concrete categories. 91h:18001
- (with Reiterman, Jan) Cartesian closed hull for metric spaces. 91k:18005
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##### 19A13 Stability for projective modules [see also 13C10]

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- Drakokhrust, Yu. A. On the group  $K_1 Spin(D)$  for skew fields over Henselian fields. (Russian. English summary) 91c:16006  
 Inoue, Tsuyoshi A note on the equivariant Whitehead groups of dihedral groups. 91h:57009  
 Milgram, R. James (with Oliver, Robert)  $SK_1(\mathbb{Z}_2[\pi])$  and surgery. 91e:57056  
 Monastyrnyi, A. P. (with Yanchevskii, V. I.) Whitehead groups of spinor groups. 91h:11043  
 Oliver, Robert *see* Milgram, R. James, 91e:57056  
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- Kaskevič, V. I. Normal structure of the special linear group of a Henselian discretely valued division algebra. (Russian) 91j:19003  
 Vaserstein, Leonid N. On normal subgroups of  $GL_2$  over rings with many units. 91j:19004

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- Abe, Eichi Normal subgroups of Chevalley groups over commutative rings. 91a:20046  
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**19B99 None of the above, but in this section**

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 Gubeladze, Joseph Classical algebraic  $K$ -theory of monoid algebras. 91j:19005

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- Connolly, Frank (with Lück, Wolfgang) The involution on the equivariant Whitehead group. 91d:57021  
 Inassaridze, Kh. N.  $K$ -theory of special normed rings. (Russian. English and Georgian summaries) 91d:19003  
 Lück, Wolfgang *see* Connolly, Frank, 91d:57021  
 Raskind, Wayne On  $K_1$  of curves over global fields. 91m:14013

**19Cxx Steinberg groups and  $K_2$** **19C20 Symbols, presentations and stability of  $K_2$** 

- Davydov, A. A.  $K_2$ -stabilization for endomorphism rings of strictly projective modules. 91d:19001  
 Hutchinson, Kevin A new approach to Matsumoto's theorem. 91j:19006  
 van der Kallen, Wilberd Presenting  $K_2$  with generic symbols. 91a:19001  
 Morita, Jun (with Rehmann, Ulf) A Matsumoto-type theorem for Kac-Moody groups. 91h:19004  
 Rehmann, Ulf *see* Morita, Jun, 91h:19004

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- Abe, Eichi Normal subgroups of Chevalley groups over commutative rings. 91a:20046  
 Li, Fu An Finite presentability of Steinberg groups over group rings. 91a:20032

**19C99 None of the above, but in this section**

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- Czogala, Alfred The functor  $K_2$  for multiquadratic number fields. 91g:11136  
 Gubeladze, I. Dzh. "Classical" algebraic  $K$ -theory of monoid algebras. III. (Georgian. English and Russian summaries) 91j:19002

**19Dxx Higher algebraic  $K$ -theory****19D06  $Q$ - and plus-constructions**

- Grayson, Daniel R. Exterior power operations on higher  $K$ -theory. 91h:19005  
 Mitchell, Stephen A. The rank filtration of Quillen's  $Q$ -construction. 91m:19001

Items with secondary classifications in 19D06

- Fiedorowicz, Zbigniew (with Schwänzl, Roland; Steiner, Richard J.; Vogt, Rainer M.) Nonconnective delooping of  $K$ -theory of an  $A_\infty$  ring space. 91h:55016  
 Schwänzl, Roland (with Vogt, Rainer M.)  $E_\infty$ -monoids with coherent homotopy inverses are abelian groups. 91e:55013  
 — *see also* Fiedorowicz, Zbigniew; et al., 91h:55016  
 Steiner, Richard J. *see* Fiedorowicz, Zbigniew; et al., 91h:55016  
 Vogt, Rainer M. *see* Fiedorowicz, Zbigniew; et al., 91h:55016 and Schwänzl, Roland, 91e:55013

**19D10 Algebraic  $K$ -theory of spaces**

- Carlsson, Gunnar Homotopy fixed points in the algebraic  $K$ -theory of certain infinite discrete groups. 91c:19002  
 Cohen, Ralph L. (with Jones, John D. S.) Algebraic  $K$ -theory of spaces and the Novikov conjecture. 91h:19001  
 Jones, John D. S. *see* Cohen, Ralph L., 91h:19001

Items with secondary classifications in 19D10

- Baues, Hans Joachim (with Dreckmann, Winfried) The cohomology of homotopy categories and the general linear group. 91d:18008  
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 Dunn, Gerald Dihedral and quaternionic homology and mapping spaces. 91g:55012  
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### 19D23 Symmetric monoidal categories [see also 18D10]

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Fiedorowicz, Zbigniew (with Ogle, C.) Algebraic  $K$ -theory and configuration spaces. 91i:55010

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### 19D25 Karoubi-Villamayor-Gersten $K$ -theory

Inassaridze, Kh. N.  $K$ -theory of special normed rings. (Russian. English and Georgian summaries) 91d:19003

### 19D35 Negative $K$ -theory, $NK$ and $Nil$

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Rodicio, Antonio G. Smooth algebras and vanishing of Hochschild homology. 91h:16017

### 19D45 Higher symbols, Milnor $K$ -theory

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Sah, Chih-Han Homology of classical Lie groups made discrete. III. 91k:19002

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— see also Merkur'ev, A. S., 91g:19002

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Merkur'ev, A. S. (with Suslin, A. A.) Norm residue homomorphism of degree three. 91i:11083

Somekawa, M. On Milnor  $K$ -groups attached to semi-abelian varieties. 91k:11052

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### 19D50 Computations of higher $K$ -theory of rings [see also 13D15, 16E20]

Dergachev, V. M. Algebraic  $K$ -groups as homotopy groups of a simplicial analogue of Grassmann manifolds. 91m:19003

Laubenbacher, Reinhard C. (with Webb, David L.) On  $SG_n$  of orders. 91h:19006

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Items with secondary classifications in 19D50

Kahn, Bruno Some conjectures on the algebraic  $K$ -theory of fields. I.  $K$ -theory with coefficients and étale  $K$ -theory. 91d:19006

Wodzicki, Mariusz Excision in cyclic homology and in rational algebraic  $K$ -theory. 91h:19008

### 19D55 $K$ -theory and homology; cyclic homology and cohomology [see also 18G60]

Bentzen, S. (with Madsen, I.) Trace maps in algebraic  $K$ -theory and the Coates-Wiles homomorphism. 91i:19002

Cibila, Claude Cyclic and Hochschild homology of 2-nilpotent algebras. 91j:19007

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— see also Getzler, Ezra, 91e:19001

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Kassel, Christian Caractère de Chern bivariant. (English summary) [A bivariant Chern character] 91f:19002

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Douglas, Ronald G. (with Hurder, Steven; Kaminker, Jerome) Cyclic cocycles, renormalization and eta-invariants. 91m:58152

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Hegenbarth, Friedrich On the degree of irreducible representations of the symmetric group. (Italian. English summary) 91d:20016

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Jaffe, Arthur M. (with Lesniewski, Andrzej; Wiśniowski, Marek) Deformations of super-KMS functionals. 91e:46095

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Kassel, Christian Le résidu non commutatif (d'après M. Wodzicki). [The noncommutative residue (after M. Wodzicki)] 91e:58190

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Tabak, Mohamed Sur l'homologie d'André-Quillen. (English summary) [On the André-Quillen homology] 91d:13022

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Reid, Les (with Sherman, C.) The relative form of Gersten's conjecture for power series over a complete discrete valuation ring. 91b:19001

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Wodzicki, Mariusz Homological properties of rings of functional-analytic type. 91j:19011

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Carey, Alan L. (with Evans, David E.) Algebras almost commuting with Clifford algebras. 91h:46122

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Taylor, Laurence R. see Hambleton, Ian; et al., 91b:18015

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### 19Exx $K$ -theory in geometry

#### 19E08 $K$ -theory of schemes [see also 14C35]

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Colliot-Thélène, Jean-Louis (with Parimala, Raman; Sridharan, Ramaiyengar) Un théorème de pureté locale. (English summary) [A local purity theorem] 91h:14015



- Gillet, Henri (with Soulé, Christophe) Characteristic classes for algebraic vector bundles with Hermitian metric. I. 91m:14032a  
 — (with Soulé, Christophe) Characteristic classes for algebraic vector bundles with Hermitian metric. II. 91m:14032b  
 Parimala, Raman see Colliot-Thélène, Jean-Louis; et al., 91h:14015  
 Rost, Markus Durch Normengruppen definierte birationale Invarianten. (English and French summaries) [Birational invariants defined by norm groups] 91h:14016  
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 — Le groupe de Picard est un foncteur contracté. (English summary) [The Picard group is a contracted functor] 91e:19003  
 Wingberg, Kay On the étale *K*-theory of an elliptic curve with complex multiplication for regular primes. 91i:11064

### 19E15 Algebraic cycles [see also 14C25, 14C35]

- Barbieri Viale, Luca  $\mathcal{K}$ -cohomology and local algebraic cycles. (Italian. English and French summaries) 91k:19005  
 Landsburg, Steven E. Relative cycles and algebraic *K*-theory. 91d:19005  
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 Batyrev, V. V. Rational equivalence and *K*-theory on toric varieties. (Russian) (see 91k:00013)  
 El Zein, F. see Angéniol, B., 91e:14007  
 Esnault, Hélène A note on the cycle map. 91j:14005  
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 Somekawa, M. On Milnor *K*-groups attached to semi-abelian varieties. 91k:11052

### 19E20 Relations with cohomology theories [see also 14Fxx]

- Beilinson, A. A. (with Varchenko, A. N.; Goncharov, A. B.; Shekhtman, V. V.) Projective geometry and *K*-theory. 91k:19006  
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 Pascual Gaiña, Pere Cohomology of Lie groups made discrete. 91g:19004  
 Shekhtman, V. V. see Beilinson, A. A.; et al., 91k:19006  
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 Zhurav, Yu. I. The Chern character in *K*-theory. (Russian) 91a:19004

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- Angéniol, B. (with El Zein, F.) Théorème de Riemann-Roch par désingularisation. (English summary) [Deriving the Riemann-Roch theorem via desingularization] 91e:14007  
 Barbieri Viale, Luca  $\mathcal{K}$ -cohomology and local algebraic cycles. (Italian. English and French summaries) 91k:19005  
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 Jannsen, Uwe  $\star$  Mixed motives and algebraic *K*-theory. 91g:14008  
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### 19Fxx *K*-theory in number theory [see also 11R70, 11S70]

### 19F05 Generalized class field theory [see also 11G45]

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- Fesenko, I. B. see Vostokov, S. V.; et al., 91m:11105  
 Kolster, Manfred Odd torsion in the tame kernel of totally real number fields. 91m:11102  
 Koya, Yoshihiro A generalization of class formation by using hypercohomology. 91h:11168

- Nisnevich, Ye. A. The completely decomposed topology on schemes and associated descent spectral sequences in algebraic *K*-theory. 91e:19004  
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### 19F15 Symbols and arithmetic [see also 11R37]

#### Items with secondary classifications in 19F15

- Jaulent, Jean-François La théorie de Kummer et le  $K_2$  des corps de nombres. [Kummer theory and the  $K_2$  of number fields] 91m:11101

### 19F27 Étale cohomology, higher regulators, zeta and *L*-functions [see also 11G40, 11R42, 11S40, 14F20, 14G10]

- Deninger, Christopher Higher regulators and Hecke *L*-series of imaginary quadratic fields. II. 91h:19003  
 Weibel, Charles A. Le groupe de Picard est un foncteur contracté. (English summary) [The Picard group is a contracted functor] 91e:19003

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- Bentzen, S. (with Madsen, I.) Trace maps in algebraic *K*-theory and the Coates-Wiles homomorphism. 91h:19002  
 Douai, Jean-Claude Sur les extensions totalement décomposées de certains corps de fonctions. [On completely decomposed extensions of certain function fields] 91g:11071  
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 Levine, Marc The indecomposable  $K_3$  of fields. 91a:11061  
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 Gillet, Henri (with Soulé, Christophe) Un théorème de Riemann-Roch-Grothendieck arithmétique. (English summary) [An arithmetic Riemann-Roch-Grothendieck theorem] 91m:14031  
 Hurrelbrink, Jürgen Class numbers, units and  $K_2$ . 91d:11145  
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 Smith, Victor Invariants of representations. 91h:20010  
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 Targem, O. I. Finite width of arithmetic subgroups of Chevalley groups of rank  $\geq 2$ . 91h:11029  
 Urbanowicz, Jerzy A generalization of the Lerch-Mordell formulas for positive discriminants. 91m:11103

### 19Gxx *K*-theory of forms [see also 11Exx]

### 19G05 Stability for quadratic modules

- Morita, Jun (with Rehmman, Ulf) Symplectic  $K_2$  of Laurent polynomials, associated Kac-Moody groups and Witt rings. 91k:19007  
 Rehmman, Ulf see Morita, Jun, 91k:19007

### 19G12 Witt groups of rings [see also 11E81]

- Miyamoto, Masahiko Equivariant Witt groups of finite groups of odd order. 91g:19005

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- Arason, Jón Kr. (with Elman, Richard; Jacob, Bill) On quadratic forms and Galois cohomology. 91d:11038  
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 Dayton, Barry H. (with Weibel, Charles A.) On the naturality of Pic,  $SK_0$  and  $SK_1$ . 91b:14005  
 — The Picard group of a reduced *G*-algebra. 91d:14002  
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### 19G24 *L*-theory of group rings [see also 11E81]

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Farrell, F. Thomas (with Jones, Lowell Edwin) ★ Classical aspherical manifolds. 91k:57001

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Milgram, R. James (with Oliver, Robert)  $SK_1(\mathbb{Z}_2[x])$  and surgery. 91e:57056

Miyamoto, Masahiko Equivariant Witt groups of finite groups of odd order. 91g:19005

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Oliver, Robert see Milgram, R. James, 91e:57056

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## 19G38 Hermitian $K$ -theory, relations with $K$ -theory of rings

Items with secondary classifications in 19G38

Morita, Jun (with Rehmman, Ulf) Symplectic  $K_2$  of Laurent polynomials, associated Ka-

Moody groups and Witt rings. 91k:19007

Rehmman, Ulf see Morita, Jun, 91k:19007

## 19G99 None of the above, but in this section

Paulin, I. A. Comparison of Quillen's and Volodin's  $K$ -theories. (Russian) 91e:19005

Ranicki, Andrew Additive  $L$ -theory. 91e:19004

Shapiro, Jack M. Cup product structure for symplectic  $K_2$ . 91k:19004

Items with secondary classifications in 19G99

Taylor, Martin J. Rings of integers and trace forms for tame extensions of odd degree. 91k:11128

## 19Jxx Obstructions from topology

## 19Kxx $K$ -theory and operator algebras [See mainly 46L80, and also 46M20]

### 19K14 $K_0$ as an ordered group, traces

Items with secondary classifications in 19K14

Blackadar, Bruce Symmetries of the CAR algebra. 91k:46084

Cohn, P. M. Rank functions on rings. 91k:16002

Kodaka, Kazumori Automorphisms, diffeomorphisms and strong Morita equivalence of irrational rotation  $C^*$ -algebras. 91e:46063

Masuda, Tetsuya (with Nakagami, Yoshiomi; Watanabe, Junsei) Noncommutative differential geometry on the quantum  $SU(2)$ . I. An algebraic viewpoint. 91j:58016

Nakagami, Yoshiomi see Masuda, Tetsuya; et al., 91j:58016

Poon, Yin Tung AF subalgebras of certain crossed products. 91k:46078

Watanabe, Junsei see Masuda, Tetsuya; et al., 91j:58016

### 19K33 EXT and $K$ -homology [see also 55N22]

Items with secondary classifications in 19K33

Gekhtale, Sudhir (with Salinas, Norberto) Some applications of  $K$ -theory and Ext-theory to joint quasitriangularity. 91m:47066

Salinas, Norberto see Gekhtale, Sudhir, 91m:47066

### 19K35 Kasparov theory ( $KK$ -theory) [see also 58G12]

Higson, Nigel Categories of fractions and excision in  $KK$ -theory. 91e:19005

Hilsum, Michel Fonctorialité en  $K$ -théorie bivalente pour les variétés lipschitziennes. (English summary) [Functoriality in bivariant  $K$ -theory for Lipschitz manifolds] 91j:19012

Rosenberg, Jonathan  $K$  and  $KK$ : topology and operator algebras. 91j:19013

Items with secondary classifications in 19K35

Connes, Alain (with Higson, Nigel) Déformations, morphismes asymptotiques et  $K$ -théorie bivalente. (English summary) [Deformations, asymptotic morphisms and bivariant  $K$ -theory] 91m:46114

Dădărlat, Marius (with Némethi, András) Shape theory and (connective)  $K$ -theory. 91j:46092

Higson, Nigel see Connes, Alain, 91m:46114

Kandelaki, T. K. On the  $K$ -theory of  $\mathbb{Z}_2$ -graded  $C^*$ -categories. (Russian. English and Georgian summaries) 91k:46085

Kasparov, G. G. (with Skandalis, Georges) Groupes agissant sur des immeubles de Bruhat-Tits,  $K$ -théorie opératoire et conjecture de Novikov. (English summary) [Groups acting on Bruhat-Tits buildings, operator  $K$ -theory and Novikov's conjecture] 91k:57031

(May, J. Peter) see Rosenberg, Jonathan, 91k:57039

Némethi, András see Dădărlat, Marius, 91j:46092

Rosenberg, Jonathan (with Weinberger, Shmuel) An equivariant Novikov conjecture. 91k:57039

Skandalis, Georges see Kasparov, G. G., 91k:57031

Taylor, Michael E. Pseudodifferential operators and  $K$ -homology. II. 91m:58153b

— Pseudodifferential operators and  $K$ -homology. 91m:58153a

Thomsen, Klaus Homotopy classes of  $\ast$ -homomorphisms between stable  $C^*$ -algebras and their multiplier algebras. 91m:46115

Weinberger, Shmuel see Rosenberg, Jonathan, 91k:57039

Zekri, R. Abstract Bott periodicity in  $KK$ -theory. 91k:46087

## 19K56 Index theory [see also 58G12]

Douglas, Ronald G. (with Wojciechowski, K. P.) Analytic realization of relative  $K$ -homology on manifolds with boundary and pairing with  $K$ -cohomology. (German and Russian summaries) 91g:19006

Getzler, Ezra (with Szenes, András) On the Chern character of a theta-summable Fredholm module. 91g:19007

Szenes, András see Getzler, Ezra, 91g:19007

Wojciechowski, K. P. see Douglas, Ronald G., 91g:19006

Items with secondary classifications in 19K56

Baker, B. Mitchell (with Handelman, D. E.) Random walks,  $K_0$ -theory for AF algebras, and classical statistical mechanics. (see 91g:47002)

Baum, Paul (with Douglas, Ronald G.; Taylor, Michael E.) Cycles and relative cycles in analytic  $K$ -homology. 91b:58244

Block, Jonathan (with Fox, Jeffrey) Asymptotic pseudodifferential operators and index theory. 91k:58186

Boutet de Monvel, L. (with Malgrange, B.) Le théorème de l'indice relatif. [The relative index theorem] 91d:58241

Douglas, Ronald G. see Baum, Paul; et al., 91b:58244

Fox, Jeffrey (with Haskell, Peter; Raeburn, Iain) Kasparov products,  $KK$ -equivalence, and proper actions of connected reductive Lie groups. 91a:46066

— see also Block, Jonathan, 91k:58186

Getzler, Ezra (with Jones, John D. S.)  $A_{\infty}$ -algebras and the cyclic bar complex. 91e:19001

Gilkey, Peter B. The eta invariant of even order operators. 91b:58241

Handelman, D. E. see Baker, B. Mitchell, (91g:47002)

Haskell, Peter see Fox, Jeffrey; et al., 91a:46066

Higson, Nigel An approach to  $\mathbb{Z}/k$ -index theory. 91b:58109

Hilsum, Michel Fonctorialité en  $K$ -théorie bivalente pour les variétés lipschitziennes. (English summary) [Functoriality in bivariant  $K$ -theory for Lipschitz manifolds] 91j:19012

Harder, Steven Eta invariants and the odd index theorem for coverings. 91e:58134

Jaffe, Arthur M. (with Lesniewski, Andrzej) An index theorem for super derivations. 91c:82007

— (with Lesniewski, Andrzej; Osterwalder, Konrad) On super-KMS functionals and entire cyclic cohomology. 91b:46071

Jones, John D. S. see Getzler, Ezra, 91e:19001

Lesch, Matthias  $K$ -theory of Toeplitz  $C^*$ -algebras on Lie spheres. 91k:46080

Lesniewski, Andrzej see Jaffe, Arthur M.; et al., 91b:46071 and 91c:82007

Longo, Roberto Index of subfactors and statistics of quantum fields. II. Correspondences, braid group statistics and Jones polynomial. 91j:46083

Macho Stadler, Marta La conjecture de Baum-Connes pour un feuilletage sans holonomie de codimension un sur une variété fermée. (English summary) [The Baum-Connes conjecture for a codimension-one foliation without holonomy on a closed manifold] 91k:58247

Malgrange, B. see Boutet de Monvel, L., 91d:58241

Mingo, James A. (with Spielberg, John S.) The index of normal Fredholm elements of  $C^*$ -algebras. 91k:46081

Mori, Kenichi Fredholm modules on Kirillov orbits and  $K$ -theory of  $C^*$ -algebras. 91b:22022

Moriyoshi, H. Secondary characteristic numbers and locally free  $S^1$ -actions. 91b:57035

Osterwalder, Konrad see Jaffe, Arthur M.; et al., 91b:46071

Phillips, N. Christopher Classifying algebras for the  $K$ -theory of  $\sigma$ - $C^*$ -algebras. 91b:46119

Raeburn, Iain see Fox, Jeffrey; et al., 91a:46066

Roe, John Exotic cohomology and index theory. 91e:58188

Spielberg, John S. see Mingo, James A., 91k:46081

Sunder, V. S. Hypergroups and subfactors. 91m:46096

Suslin, A. A. (with Wodzicki, Mariusz) Excision in algebraic  $K$ -theory and Karoubi's conjecture. 91j:19008

Taylor, Michael E. Pseudodifferential operators and  $K$ -homology. II. 91m:58153b

— Pseudodifferential operators and  $K$ -homology. 91m:58153a

— see also Baum, Paul; et al., 91b:58244

Wei, Guo Qiang (with Xue, Yi Feng) The  $C^*$ -algebra generated by strong  $\theta$ -operators and its  $K$ -theory. 91g:47035

Wodzicki, Mariusz see Suslin, A. A., 91j:19008

Xue, Yi Feng see Wei, Guo Qiang, 91g:47035

## 19K99 None of the above, but in this section

Items with secondary classifications in 19K99

Baum, Paul (with Connes, Alain)  $K$ -theory for discrete groups. 91k:46083

Connes, Alain see Baum, Paul, 91k:46083

Khelemskii, A. Ya. Homological essence of amenability in the sense of A. Connes: the injectivity of the predual bimodule. 91k:46102

Phillips, N. Christopher Representable  $K$ -theory for  $\sigma$ - $C^*$ -algebras. 91k:46082

— The Atiyah-Segal completion theorem for  $C^*$ -algebras. 91k:46083

—  $K$ -theory and noncommutative homotopy theory. (see 91g:47002)

—  $C^\infty$  loop algebras and noncommutative Bott periodicity. 91j:58157

Rieffel, Marc A. Noncommutative tori—a case study of noncommutative differentiable manifolds. 91d:58012

Rosenberg, Jonathan Continuous-trace algebras from the bundle theoretic point of view. 91d:46090

Rupp, Rudolf Stable rank of subalgebras of the ball algebras. 91a:46070

Wodzicki, Mariusz Homological properties of rings of functional-analytic type. 91j:19011

## 19Lxx Topological $K$ -theory [see also 55N15, 55R50, 55S25]

### 19L10 Riemann-Roch theorems, Chern characters

Items with secondary classifications in 19L10

Elliott, George A. (with Nest, Ryszard; Rørdam, Mikael) The cyclic homology of algebras with adjoined unit. 91m:19004

Nest, Ryszard see Elliott, George A.; et al., 91m:19004

Rørdam, Mikael see Elliott, George A.; et al., 91m:19004

Shekhtman, V. V. Riemann-Roch theorem after D. Toledo and Y.-L. Tong. 91b:58242

### 19L20 $J$ -homomorphism, Adams operations [see also 55Q50]

Items with secondary classifications in 19L20

Loday, Jean-Louis (with Procesi, Claudio) Cyclic homology and lambda operations. 91e:19002

Procesi, Claudio see Loday, Jean-Louis, 91e:19002

### 19L41 Connective $K$ -theory, cobordism [see also 55N22]

Items with secondary classifications in 19L41

Nakagawa, George On the  $[p^k]$ -series in Brown-Peterson homology. 91g:55011

### 19L47 Equivariant $K$ -theory [see also 55N91, 55P91, 55Q91, 55R91, 55S91]

Items with secondary classifications in 19L47

Borho, W. (with Brylinski, Jean-Luc; MacPherson, R.) Nilpotent orbits, primitive ideals, and characteristic classes. 91d:17012

Brylinski, Jean-Luc see Borho, W.; et al., 91d:17012

MacPherson, R. see Borho, W.; et al., 91d:17012

### 19L99 None of the above, but in this section

Items with secondary classifications in 19L99

Fischer, Thomas Georg Bert  $K$ -theory of function rings. 91j:19010

Mahowald, Mark (with Thompson, Robert D.)  $K$ -theory and unstable homotopy groups. 91d:55010

Suslin, A. A. (with Wodzicki, Mariusz) Excision in algebraic  $K$ -theory and Karoubi's conjecture. 91j:19008

Thompson, Robert D. see Mahowald, Mark, 91d:55010

Wodzicki, Mariusz see Suslin, A. A., 91j:19008

### 19M05 Miscellaneous applications of $K$ -theory

Items with secondary classifications in 19M05

Anderson, Douglas R. (with Munkholm, Hans Jørgen) Geometric modules and algebraic  $K$ -homology theory. 91g:57033

Bojanowska, Agnieszka Finite cyclic subgroups determine the spectrum of the equivariant  $K$ -theory. 91k:55007

Bökstedt, M. (with Hsiang, W. C.; Madsen, I.) The cyclotomic trace and the  $K$ -theoretic analogue of Novikov's conjecture. 91e:57051

Cappell, Sylvain E. (with Shaneson, Julius L.; Steinberger, Mark; West, James E.) Nonlinear similarity begins in dimension six. 91e:57065

Connes, Alain (with Gromov, Mikhael L.; Moscovici, Henri) Conjecture de Novikov et fibrés presque plats. (English summary) [The Novikov conjecture and almost flat vector bundles] 91e:57041

Ghazal, Tahsin On obstructions to  $K^*(; \mathbb{Z}/2)$ -orientability. (Arabic summary) 91g:55024

Gromov, Mikhael L. see Connes, Alain; et al., 91e:57041

Grünberg, Karl W. Stably free resolutions of lattices over finite groups. 91k:20013

Hsiang, W. C. see Bökstedt, M.; et al., 91e:57051

Kang, Sungho A note on  $K$ -groups in topology. (Not in MR)

Kharshiladze, A. F. see Muranov, Yu. V., 91h:57023

Lück, Wolfgang (with Madsen, I.) Equivariant  $L$ -theory. II. 91g:57039

Madsen, I. see Bökstedt, M.; et al., 91e:57051 and Lück, Wolfgang, 91g:57039

Mitchell, Stephen A. The Morava  $K$ -theory of algebraic  $K$ -theory spectra. 91m:55002

Morimoto, Masaharu Bak groups and equivariant surgery. II. 91g:57034

Moscovici, Henri see Connes, Alain; et al., 91e:57041

Munkholm, Hans Jørgen see Anderson, Douglas R., 91g:57033

Muranov, Yu. V. (with Kharshiladze, A. F.) Browder-Livesay groups of abelian 2-groups. (Russian) 91h:57023

Pardos, William L. Intersection homology Poincaré spaces and the characteristic variety theorem. 91d:57019

Pradines, Jean Morphisms between spaces of leaves viewed as fractions. (French summary) 91k:57018

Ranicki, Andrew (with Weiss, Michael S.) Chain complexes and assembly. 91e:55009

Shaneson, Julius L. see Cappell, Sylvain E.; et al., 91e:57065

Steinberger, Mark see Cappell, Sylvain E.; et al., 91e:57065

Weiss, Michael S. see Ranicki, Andrew, 91e:55009

West, James E. see Cappell, Sylvain E.; et al., 91e:57065

## 20-XX Group theory and generalizations

### 20-01 Instructional exposition (textbooks, tutorial papers, etc.)

Aleksandrov, P. S. ★ Úvod do teorie grup. (Czech) [Introduction to group theory]

91k:20001

Cohen, Daniel E. ★ Combinatorial group theory: a topological approach. 91d:20001

Collins, Michael J. ★ Representations and characters of finite groups. 91f:20001

Johnson, David Lawrence ★ Presentations of groups. 91h:20001

Jones, H. F. ★ Groups, representations and physics. 91h:20002

Shunkov, V. P. ★  $M_p$ -группы. (Russian) [ $M_p$ -groups] 91k:20003

(Volf, Milan) see Aleksandrov, P. S., 91k:20001

Items with secondary classifications in 20-01

(Artin, Emil) see van der Waerden, B. L., 91h:00009a

(Blum, Fred) see van der Waerden, B. L., 91h:00009a

Chen, Jin Quan ★ Group representation theory for physicists. 91h:81047

Eisenreich, Günther ★ Lexikon der Algebra. (German) [Lexicon of algebra] 91i:00005

(Hamermesh, Morton) see Chen, Jin Quan, 91h:81047

Humphreys, J. F. (with Prest, M. Y.) ★ Numbers, groups and codes. 91a:00005

(Jansz, Gerald J.) see McCoy, Neal H., 91a:00006

McCoy, Neal H. ★ Introduction to modern algebra. 91a:00006

(Noether, Emmy) see van der Waerden, B. L., 91h:00009a

Prest, M. Y. see Humphreys, J. F., 91a:00005

(Schulzberger, John R.) see van der Waerden, B. L., 91h:00009a

van der Waerden, B. L. ★ Algebra. Vol. I. 91h:00009a

### 20-02 Research exposition (monographs, survey articles)

Dicks, Warren (with Dunwoody, M. J.) ★ Groups acting on graphs. 91b:20001

Dunwoody, M. J. see Dicks, Warren, 91b:20001

(Gamkrelidze, R. V.) see Current problems in mathematics. Fundamental directions, 91m:20001

Kleidman, Peter B. (with Liebeck, Martin W.) ★ The subgroup structure of the finite classical groups. 91g:20001

Liebeck, Martin W. see Kleidman, Peter B., 91g:20001

Ofshanski, A. Yu. (with Shmel'kin, A. L.) Infinite groups. (Russian) 91m:20002

Shmel'kin, A. L. see Ofshanski, A. Yu., 91m:20002

Zaleski, A. E. Linear groups. (Russian) 91m:20003

Items listed otherwise than by author

Current problems in mathematics. Fundamental directions ★ Современные проблемы математики. Фундаментальные направления. Том 37. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 37] 91m:20001

Itogi Nauki i Tekhniki ★ Современные проблемы математики. Фундаментальные направления. Том 37. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 37] 91m:20001

Items with secondary classifications in 20-02

Hiss, Gerhard (with Lux, K.) ★ Brauer trees of sporadic groups. 91k:20018

Karpilovsky, Gregory ★ Induced modules over group algebras. 91b:16001

Lux, K. see Hiss, Gerhard, 91k:20018

### 20-03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 20-03

Antropov, A. A. On the history of the concept of genus of binary quadratic form. (Russian. English summary) 91i:01031

(Betti, Enrico) see Mammone, Pasquale, 91j:01026

(Frankenheim, Moritz Ludwig) see Scholz, Erhard, 91e:01016

(Grassmann, Justus Götthard) see Scholz, Erhard, 91e:01016

(Haüy, R.-J.) see Scholz, Erhard, 91e:01016

(Hessel, Johann Friedrich Scholz) see Scholz, Erhard, 91e:01016

Mammone, Pasquale Sur l'apport d'Enrico Betti en théorie de Galois. [The contribution of Enrico Betti to Galois theory] 91j:01026

Neumann, Peter M. On the date of Cauchy's contributions to the founding of the theory of groups. 91a:01026

Scholz, Erhard ★ Symmetrie—Gruppe—Dualität. (German) [Symmetry—group—duality] 91j:01029

— Crystallographic symmetry concepts and group theory (1850–1880). 91e:01015

— The rise of symmetry concepts in the atomistic and dynamistic schools of crystallography, 1815–1830. (French summary) 91e:01016

(Weiss, Christian Samuel) see Scholz, Erhard, 91e:01016

### 20-04 Explicit machine computation and programs (not the theory of computation or programming)

Kokosidaki, Zbigniew On generation of permutations through decomposition of symmetric groups into cosets. (Not in MR)

Mecky, M. (with Neubüser, J.) Some remarks on the computation of conjugacy classes of soluble groups. 91i:20001

Neubüser, J. see Mecky, M., 91i:20001

Parker, R. A. (with Wilson, Robert A.) The computer construction of matrix representations of finite groups over finite fields. 91j:20001

Ryba, A. J. E. Computer condensation of modular representations. 91j:20002

Schmalz, Bernd Verwendung von Untergruppenleitern zur Bestimmung von Doppelpnebenklassen. [Use of subgroup ladders for the determination of double cosets] 91e:20001



Wilson, Robert A. *see* Parker, R. A., 91j:20001

#### Items with secondary classifications in 20-04

- Bhadov, V. V. (with Pantelev, V. I.; Khlamov, E. V.) Automation of studies of combinatorial group theory using a computer. (Russian) **91k:20038**
- Celler, F. (with Neubüser, J.; Wright, C. R. B.) Some remarks on the computation of complements and normalizers in soluble groups. **91m:20026**
- Gollan, Holger W. (with Grabmeier, Johannes) Algorithms in representation theory and their realization in the computer algebra system SCRATCHPAD. **91g:20015**
- Grabmeier, Johannes *see* Gollan, Holger W., 91g:20015
- Iliopoulos, Costas S. Worst-case complexity bounds on algorithms for computing the canonical structure of finite abelian groups and the Hermite and Smith normal forms of an integer matrix. **91a:20065**
- Worst-case complexity bounds on algorithms for computing the canonical structure of infinite abelian groups and solving systems of linear Diophantine equations. **91a:20066**
- Khlamov, E. V. *see* Bhadov, V. V.; et al., 91k:20038
- Neubüser, J. *see* Celler, F.; et al., 91m:20026
- Newman, M. F. Groups of prime-power order. **91m:20031**
- Pantelev, V. I. *see* Bhadov, V. V.; et al., 91k:20038
- Ryba, A. J. E. Matrix generators for the Held group. **91k:20024**
- Schneider, Gerhard J. A. Dixon's character table algorithm revisited. **91j:20036**
- Sims, Charles C. Implementing the Baumslag-Cannonito-Miller polycyclic quotient algorithm. **91g:20046**
- Slatery, Michael C. Some CAYLEY examples. **91b:20026**
- Wright, C. R. B. *see* Celler, F.; et al., 91m:20026
- Yu, Yuan Computer proofs in group theory. **91m:68154**

#### 20-06 Proceedings, conferences, collections, etc.

- (Belonogov, V. A.) *see* Subgroup structure of groups, 91a:20001
- (Fine, Benjamin) *see* Combinatorial group theory, 91e:20001
- (Gaglione, Anthony M.) *see* Combinatorial group theory, 91e:20001
- (Kargapov, M. L.) *see* All-Union Symposium: Group Theory, 91k:20004
- (Kostrikin, Aleksei Ivanovich) *see* Subgroup structure of groups, 91a:20001
- (Kovács, L. G.) *see* Groups—Canberra 1989, 91i:20002
- (Lypin, E. S.) *see* Studies of semigroups, 91k:20006
- (Michler, Gerhard O.) *see* Representation theory of finite groups and finite-dimensional algebras, 91m:20005
- (Mukhin, Yu. N.) *see* All-Union Symposium: Group Theory, 91k:20004
- (Onishchik, A. L.) *see* Problems in group theory and in homological algebra, 91e:20004
- (Rings, Claus Michael) *see* Representation theory of finite groups and finite-dimensional algebras, 91m:20005
- (Shemetkov, L. A.) *see* Problems in algebra, 91e:20003
- (Starostin, A. L.) *see* Subgroup structure of groups, 91a:20001 and All-Union Symposium: Group Theory, 91k:20004
- (Tang, Francis C. Y.) *see* Combinatorial group theory, 91e:20001
- (Tomimaga, Hisao) *see* Proceedings: Symposium on the Semigroup Theory and its Related Fields, 91k:20005
- (Yamada, Miyuki) *see* Proceedings: Symposium on the Semigroup Theory and its Related Fields, 91k:20005
- (Zhitomirskii, G. I.) *see* Theory of semigroups and its applications, 91e:20005

#### Items listed otherwise than by author

- Algebraic groups and related topics** ★ Daisi gun to sono shūhen. [Algebraic groups and related topics] **91m:20004**
- All-Union Symposium:**
- Group Theory ★ XI Всесоюзный Симпозиум по Теории Групп. (Russian) [XI All-Union Symposium on Group Theory] **91k:20004**
- Bielefeld** ★ Representation theory of finite groups and finite-dimensional algebras. **91m:20005**
- Birthday:**
- Kargapov, M. L. ★ XI Всесоюзный Симпозиум по Теории Групп. (Russian) [XI All-Union Symposium on Group Theory] **91k:20004**
- Bressanone** ★ Proceedings of the Second International Group Theory Conference. (Not in MR)
- Canberra** ★ Groups—Canberra 1989. **91i:20002**
- College Park, MD** ★ Combinatorial group theory. **91e:20001**
- Combinatorial group theory** ★ Combinatorial group theory. **91e:20001**
- Computational group theory** ★ Computational group theory. Part I. **91e:20002**
- Conference:**
- Group Theory ★ Proceedings of the Second International Group Theory Conference. (Not in MR)
- Representation Theory of Finite Groups and Finite-dimensional Algebras ★ Representation theory of finite groups and finite-dimensional algebras. **91m:20005**
- Theory of Groups and Related Topics ★ Groups—Canberra 1989. **91i:20002**
- Contemporary Mathematics** ★ Combinatorial group theory. **91e:20001**
- Darstellungstheorie** ★ Darstellungstheorie. [Representation theory days] (Not in MR)
- Groups—Canberra 1989** ★ Groups—Canberra 1989. **91i:20002**
- Kangurka** ★ XI Всесоюзный Симпозиум по Теории Групп. (Russian) [XI All-Union Symposium on Group Theory] **91k:20004**
- Kyoto** ★ Proceedings of the International Symposium on the Semigroup Theory and its Related Fields. **91k:20005**
- Lecture Notes in Mathematics** ★ Groups—Canberra 1989. **91i:20002**
- Meeting:**
- Representation Theory Days ★ Darstellungstheorie. [Representation theory days] (Not in MR)
- Problems in algebra** ★ Вопросы алгебры. Вып. 5. (Russian) [Problems in algebra. No. 5] **91e:20003**

**Problems in group theory and in homological algebra** ★ Вопросы теории групп и гомологической алгебры. (Russian) [Problems in group theory and in homological algebra] **91e:20004**

#### Proceedings:

- Group Theory Conference** ★ Proceedings of the Second International Group Theory Conference. (Not in MR)
- Symposium on the Semigroup Theory and its Related Fields** ★ Proceedings of the International Symposium on the Semigroup Theory and its Related Fields. **91k:20005**
- Progress in Mathematics** ★ Representation theory of finite groups and finite-dimensional algebras. **91m:20005**
- Representation theory days** ★ Darstellungstheorie. [Representation theory days] (Not in MR)
- Representation theory of finite groups and finite-dimensional algebras** ★ Representation theory of finite groups and finite-dimensional algebras. **91m:20005**
- Session:**
- Combinatorial Group Theory—Infinite Groups** ★ Combinatorial group theory. **91e:20001**
- Sion** ★ Darstellungstheorie. [Representation theory days] (Not in MR)
- Studies of semigroups** ★ Исследования полугрупп. (Russian) [Studies of semigroups] **91k:20006**
- Subgroup structure of groups** ★ Подгрупповая структура групп. (Russian) [The subgroup structure of groups] **91a:20001**
- Symposium:**
- Algebraic Groups and Related Topics** ★ Daisi gun to sono shūhen. [Algebraic groups and related topics] **91m:20004**
- Semigroup Theory and its Related Fields** ★ Proceedings of the International Symposium on the Semigroup Theory and its Related Fields. **91k:20005**
- Theory of semigroups and its applications** ★ Теория полугрупп и ее приложения. (Russian) [Theory of semigroups and its applications] **91e:20005**
- Vector valued semigroups and groups** ★ Vector valued semigroups and groups. **91h:20002**

#### Items with secondary classifications in 20-06

- (Alperin, Roger C.) *see* Arboreal group theory, 91m:57001
- (Crenković, Sinika) *see* Proceedings: Conference "Algebra and Logic", 91m:00021
- (Kantor, William M.) *see* Finite geometries, buildings, and related topics, 91e:51001
- (Latiolais, P.) *see* Topology and combinatorial group theory, 91h:55001
- (Liebler, Robert A.) *see* Finite geometries, buildings, and related topics, 91e:51001
- (Payne, Stanley E.) *see* Finite geometries, buildings, and related topics, 91e:51001
- (Shelekhov, A. M.) *see* Webs and quasigroups, 91e:53003
- (Shult, Ernest E.) *see* Finite geometries, buildings, and related topics, 91e:51001

#### Items listed otherwise than by author

- Arboreal group theory** ★ Arboreal group theory. **91m:57001**
- Berkeley, CA** ★ Arboreal group theory. **91m:57001**
- Conference:**
- Algebra and Logic** ★ Proceedings of the Conference "Algebra and Logic", Sarajevo 1987. **91m:00021**
- Buildings and Related Geometries** ★ Finite geometries, buildings, and related topics. **91e:51001**
- Enfield, NH** ★ Topology and combinatorial group theory. **91h:55001**
- Finite geometries, buildings, and related topics** ★ Finite geometries, buildings, and related topics. **91e:51001**
- Hanover, NH** ★ Topology and combinatorial group theory. **91h:55001**
- Lecture Notes in Mathematics** ★ Topology and combinatorial group theory. **91h:55001**
- Pingree Park, CO** ★ Finite geometries, buildings, and related topics. **91e:51001**
- Proceedings:**
- Conference "Algebra and Logic"** ★ Proceedings of the Conference "Algebra and Logic", Sarajevo 1987. **91m:00021**
- Sarajevo** ★ Proceedings of the Conference "Algebra and Logic", Sarajevo 1987. **91m:00021**
- Seminar:**
- Topology** ★ Topology and combinatorial group theory. **91h:55001**
- Topology and combinatorial group theory** ★ Topology and combinatorial group theory. **91h:55001**
- Webs and quasigroups** ★ Ткани и квазигруппы. (Russian) [Webs and quasigroups] **91e:53003**
- Workshop:**
- Arboreal Group Theory** ★ Arboreal group theory. **91m:57001**

## 20Axx Foundations

### 20A05 Axiomatics and elementary properties

- Akhtar, Z. (with Shahidullah, A. M. M.) On characterization of groups. **91a:20002**
- Krasil'nikov, A. N. (with Shmel'kin, A. L.) On finite bases for laws of triangular matrices. **91k:20007**
- MacDonald, I. D. (with Neumann, B. H.) On commutator laws in groups. II. **91j:20003**
- Neumann, B. H. *see* MacDonald, I. D., 91j:20003
- Scapellato, Raffaele Infinite groups with Steiner functions. (Italian summary) **91k:20008**
- Shahidullah, A. M. M. *see* Akhtar, Z., 91a:20002
- Shmel'kin, A. L. *see* Krasil'nikov, A. N., 91k:20007

#### Items with secondary classifications in 20A05

- Brenner, J. L. Foundations of the theory of permutations. **91j:20005**

### 20A10 Metamathematical considerations {For word problems, see 20F10.}

## Items with secondary classifications in 20A10

- Gute, Hans B. (with Reuter, K. K.) The last word on elimination of quantifiers in modules. 91f:03075
- Morozov, A. S. Elementary properties of groups of recursive permutations. 91b:03062
- Oger, Francis Cancellation of abelian groups of finite rank modulo elementary equivalence. 91j:20129
- Point, Françoise Groups with identities. 91g:03075
- Poizat, Bruno Groups definable in an abelian group: an answer to a query from Wilfrid Augustine Hodges. (see 91f:03008)
- Reuter, K. K. see Gute, Hans B., 91f:03075

## 20A15 Applications of logic to group theory

- Cherlin, Gregory (with Grundhöfer, Theo; Nesin, Ali; Völklein, Helmut) Sharply transitive linear groups over algebraically closed fields. 91f:20002
- Grundhöfer, Theo see Cherlin, Gregory; et al., 91f:20002
- Nesin, Ali see Cherlin, Gregory; et al., 91f:20002
- Völklein, Helmut see Cherlin, Gregory; et al., 91f:20002

## Items with secondary classifications in 20A15

- Baldwin, John T. Some notes on stable groups. (see 91a:03077)
- (with Pillay, Anand) Semisimple stable and superstable groups. 91f:03064
- Baudisch, Andreas On stable solvable groups of bounded exponent. (see 91f:03008)
- Borovik, A. V. On Sylow theory for groups of finite Morley rank. 91f:03073
- Bouscaren, Elisabeth Model theoretic versions of Weil's theorem on pregroups. (see 91a:03077)
- The group configuration—after E. Hrushovski. (see 91a:03077)
- Budkin, A. I.  $\mathcal{Q}$ -theories of 2-generated groups with a given axiomatic rank. 91k:03091
- Cutler, Doyle O. The existence of certain pure dense subgroups of abelian  $p$ -groups is not decidable in ZFC. 91b:20071
- van den Dries, L. P. D. Weil's group chunk theorem: a topological setting. 91k:22003
- Foreman, Matthew Amenable group actions on the integers; an independence result. 91f:03104
- Harnik, Victor Generic formulas and types à la Hodges. (see 91a:03077)
- Hrushovski, Ehud Almost orthogonal regular types. 91k:03083
- see also Bouscaren, Elisabeth, (91a:03077)
- Ivanov, Aleksandr Anatol'evich The problem of finite axiomatizability for strongly minimal theories of graphs, and groups with more than one end. 91m:03035
- Luo, Zhu Kai Precompleteness properties of groups and linear semigroups. (Chinese. English summary) 91g:03052
- Maier, Berthold J. On nilpotent groups of exponent  $p$ . 91b:20046
- Nesin, Ali On solvable groups of finite Morley rank. 91a:03073
- see also Model theory of groups, 91a:03077
- Pillay, Anand Model theory, stability theory & stable groups. (see 91a:03077)
- On the existence of  $\mathcal{Q}$ -definable normal subgroups of a stable group. (see 91a:03077)
- see also Baldwin, John T., 91f:03064 and Model theory of groups, 91a:03077
- Point, Françoise Groups with identities. 91g:03075
- Villemaire, Roger Catégoricité relative et groupes abéliens. (English summary) [Relative categoricity and abelian groups] 91a:03076
- Abelian groups  $K_0$ -categorical over a subgroup. 91k:03094
- Wagner, Frank O. Subgroups of stable groups. 91a:03066

## Items listed otherwise than by author

- Model theory of groups ★ The model theory of groups. 91a:03077
- Notre Dame, IN ★ The model theory of groups. 91a:03077
- Seminar: Stable Group ★ The model theory of groups. 91a:03077

## 20Bxx Permutation groups

## 20B05 General theory for finite groups

- Berkovich, T. Ya. (with Berkovich, Ya. G.) Subgroups of the symmetric group. (Russian) 91j:20004
- Berkovich, Ya. G. see Berkovich, T. Ya., 91j:20004
- Brenner, J. L. Foundations of the theory of permutations. 91j:20005
- Dalla Volta, Francesca Regular orbits for projective orthogonal groups over finite fields of odd characteristic. 91a:20003
- Mantaci, Roberto Excedances et degré minimal dans les groupes de permutations. (English summary) [Excedances and minimal degree in permutation groups] 91f:20003
- Nyundo, Andrew Chola A theorem on the orders of orbits of a finite permutation group. (Not in MR)
- Praeger, Cheryl E. Finite primitive permutation groups: a survey. 91k:20009
- Subgroups of finite symmetric groups. 91b:20002
- Ralph, William J. The coherence number of a finite group. 91g:20002
- Soomro, Khuda Dino Primitive groups of degree  $2n$ . 91b:20003

## Items with secondary classifications in 20B05

- Bergman, George M. (with Lenstra, Hendrik W., Jr.) Subgroups close to normal subgroups. 91a:20004
- Bertram, Edward A. (with Gordon, Basil) Counting special permutations. 91b:05004
- Goldstein, Richard Z. (with Turner, Edward C.) Counting orbits of a product of permutations. 91c:05068
- Gordon, Basil see Bertram, Edward A., 91b:05004
- Grund, Roland Symmetrieklassen von Abbildungen und die Konstruktion von diskreten Strukturen. [Symmetry classes of mappings and the construction of discrete structures] 91m:05097
- Lenstra, Hendrik W., Jr. see Bergman, George M., 91a:20004

- Panayotopoulos, A. Permutations planaires généralisées. (English summary) [Generalized planar permutations] 91f:05005
- Turner, Edward C. see Goldstein, Richard Z., 91c:05068

## 20B07 General theory for infinite groups

- Bergman, George M. (with Lenstra, Hendrik W., Jr.) Subgroups close to normal subgroups. 91a:20004
- Cameron, Peter J. (with Thomas, Simon) Groups acting on unordered sets. 91g:20003
- Collins, Michael J. Some infinite Frobenius groups. 91i:20003
- Evans, David M. The small index property for infinite-dimensional classical groups. 91m:20006
- Kuzucuoğlu, M. Barely transitive permutation groups. 91j:20006
- Lenstra, Hendrik W., Jr. see Bergman, George M., 91a:20004
- Moran, Gadi Conjugacy classes whose square is an infinite symmetric group. 91a:20005
- Thomas, Simon see Cameron, Peter J., 91g:20003

## Items with secondary classifications in 20B07

- Bruyns, Peter Approximate centralizers in the group of homeomorphisms of the rational numbers. 91b:20005

## 20B10 Characterization theorems

- Aschbacher, Michael On conjectures of Guralnick and Thompson. 91m:20007
- Fomin, A. N. A class of 2-transitive permutation groups. (Russian) 91c:20002

## 20B15 Primitive groups

## Items with secondary classifications in 20B15

- Aschbacher, Michael On conjectures of Guralnick and Thompson. 91m:20007

## 20B20 Multiply transitive finite groups

- Peterfalvi, Thomas Sur les  $BN$ -paires scindées de rang 1, de degré impair. [On rank-1 split  $BN$ -pairs of odd degree] 91f:20004
- Rinaldi, Gloria A characterization of  $\text{PGL}(2, q)$ ,  $q$  odd. 91m:20008
- Items with secondary classifications in 20B20
- Károlyi, Gy. (with Kovács, S. J.; Pálfi, P. P.) Doubly transitive permutation groups with abelian stabilizers. 91g:20004
- Kerby, William Eine Bemerkung über die Gruppen  $\text{PGL}(2, F)$ . [A remark on the groups  $\text{PGL}(2, F)$ ] 91b:20004a
- A class of canonical sharply 3-transitive groups. 91b:20004b
- Kovács, S. J. see Károlyi, Gy.; et al., 91g:20004
- Pálfi, P. P. see Károlyi, Gy.; et al., 91g:20004
- Sehgal, Surinder K. (with Solomon, Ron) Brauer pairs with the same projective character tables. 91i:20012
- Solomon, Ron see Sehgal, Surinder K., 91i:20012
- Stinson, Douglas R. (with Teirlinck, Luc) A construction for authentication/secret codes from 3-homogeneous permutation groups. 91a:94026
- Teirlinck, Luc see Stinson, Douglas R., 91a:94026
- Wähling, Heinz (with Wefelscheid, Heinrich) Die Gruppe der speziellen gebrochen-affinen Transformationen eines  $KT$ -Fastkörpers. [The group of special fractional affine transformations of a  $KT$ -near-field] 91k:12007
- Wefelscheid, Heinrich see Wähling, Heinz, 91k:12007

## 20B22 Multiply transitive infinite groups

- Cameron, Peter J. (with Deza, Michel-Marie; Singhi, N. M.) Infinite geometric groups and sets. 91f:20005
- Deza, Michel-Marie see Cameron, Peter J.; et al., 91f:20005
- Glass, A. M. W. (with McCleary, Stephen H.) Highly transitive representations of free groups and free products. 91m:20009
- Károlyi, Gy. (with Kovács, S. J.; Pálfi, P. P.) Doubly transitive permutation groups with abelian stabilizers. 91g:20004
- Kerby, William Eine Bemerkung über die Gruppen  $\text{PGL}(2, F)$ . [A remark on the groups  $\text{PGL}(2, F)$ ] 91b:20004a
- A class of canonical sharply 3-transitive groups. 91b:20004b
- Kovács, S. J. see Károlyi, Gy.; et al., 91g:20004
- McCleary, Stephen H. see Glass, A. M. W., 91m:20009
- Pálfi, P. P. see Károlyi, Gy.; et al., 91g:20004
- Singhi, N. M. see Cameron, Peter J.; et al., 91f:20005

## Items with secondary classifications in 20B22

- Cherlin, Gregory (with Grundhöfer, Theo; Nesin, Ali; Völklein, Helmut) Sharply transitive linear groups over algebraically closed fields. 91f:20002
- Fomin, A. N. A class of 2-transitive permutation groups. (Russian) 91c:20002
- Grundhöfer, Theo see Cherlin, Gregory; et al., 91f:20002
- Nesin, Ali see Cherlin, Gregory; et al., 91f:20002
- Völklein, Helmut see Cherlin, Gregory; et al., 91f:20002

## 20B25 Finite automorphism groups of algebraic, geometric, or combinatorial structures [see also 05Bxx, 12F10, 20G40, 20H30, 51-XX]

- Bannai, Eichi Character tables of commutative association schemes. 91k:20010
- Behrendt, Gerhard Automorphism groups of comparability and covering graphs. 91j:20007
- Bonisoli, Arrigo (with Korchmáros, Gábor) A characterization of the sharply 3-transitive finite permutation groups. 91j:20008

- Buckenhout, Francis (with Delandtsheer, Anne; Doyen, Jean; Kleidman, Peter B.; Liebeck, Martin W.; Saxl, Jan) Linear spaces with flag-transitive automorphism groups. 91j:20009
- Camina, A. R. (with Di Martino, L.) The group of automorphisms of a transitive 2-(91, 6, 1) design. 91a:20006
- (with Zieschang, F.-H.) On the normal structure of flag transitive automorphism groups of 2-designs. 91h:20003
- Cooperstein, Bruce N. A note on the Weyl group of type  $E_7$ . 91j:20010
- Delandtsheer, Anne see Buckenhout, Francis; et al., 91j:20009
- Di Martino, L. see Camina, A. R., 91a:20006
- Doyen, Jean see Buckenhout, Francis; et al., 91j:20009
- Eastman, Mark (with Mason, Geoffrey) Spread-invariant representations of symmetric groups. 91c:20003
- Grigoryan, Yu. G. A group of arithmetic automorphisms of simple cycles. 91j:20011
- Guralnick, Robert M. (with Thompson, John G.) Finite groups of genus zero. 91c:20006
- Kleidman, Peter B. see Buckenhout, Francis; et al., 91j:20009
- Korchmáros, Gábor see Bonisoli, Arrigo, 91j:20008
- Liebeck, Martin W. see Buckenhout, Francis; et al., 91j:20009
- Lorimer, Peter Symmetric bipartite graphs of prime valency. 91j:20012
- Mason, Geoffrey see Eastman, Mark, 91c:20003
- Saxl, Jan see Buckenhout, Francis; et al., 91j:20009
- Senachal, Marjorie Finding the finite groups of symmetries of the sphere. 91h:20004
- Siemens, Johannes Automorphism groups as linear groups. 91h:20005
- Thompson, John G. see Guralnick, Robert M., 91c:20006
- Trofimov, V. I. On the action of primitive groups. 91j:20013
- Zieschang, F.-H. see Camina, A. R., 91h:20003

#### Items with secondary classifications in 20B25

- Ademaj, Eahref Dipoles of order 14 with a cyclic group of order 14. 91j:05011
- Bailey, R. A. Automorphism groups of block structures with and without treatments. 91g:05011
- Billotti, Mauro (with Korchmáros, Gábor) Collineation groups preserving a unit in a projective plane of even order. 91c:51003
- (with Korchmáros, Gábor) Collineation groups preserving an oval in a projective plane of odd order. 91d:51009
- (with Korchmáros, Gábor) Some finite translation planes arising from  $A_6$ -invariant ovoids of the Klein quadric. 91c:51008
- Briesenohl, Dieter On the stabilizer of a finite group of field automorphisms. 91k:12006
- Brouwer, Andries E. (with Ivanov, Andrei Vladimirovich; Klin, M. Kh.) Some new strongly regular graphs. 91f:05120
- Carlet, Claude Le groupe d'automorphismes du code de Kerdock. (English summary) [The automorphism group of the Kerdock code] 91c:94033
- Clote, Peter G. (with Kranakis, Evangelos) Boolean functions, invariance groups, and parallel complexity. 91m:68056
- Constantineau, Ivan (with Labelle, Jacques) Calcul combinatoire du nombre d'endofonctions et d'arborescences laissées fixes par une permutation. (English summary) [Combinatorial computation of the number of endofunctions and rooted trees that remain fixed under a permutation] 91c:05010
- Dempwolff, U. Involutory homologies on affine planes: the conclusion. 91g:51008
- Doyen, Jean Designs and automorphism groups. 91c:05015
- Foster, Lorraine L. On the symmetry group of the dodecahedron. 91a:51011
- Ho, Chai Yin Totally irregular collineation groups and finite Desarguesian planes. 91c:51009
- On the order of a finite projective plane and its collineation group. (see 91g:00042)
- Horvát-Baldasar, K. (with Kramer, Erika; Matulić-Bedenić, I.) On a projective plane of order 11 with Frobenius group of order 21. (Serbo-Croatian summary) 91h:51014
- Huffman, W. Cary On the equivalence of codes and codes with an automorphism having two cycles. 91i:94031
- Ito, Noboru Doubly regular asymmetric digraphs with rank 5 automorphism groups. 91h:05091
- Ivanov, Aleksandr Anatol'evich (with Ivanov, Andrei Vladimirovich) Distance-transitive graphs of valency  $k$ ,  $8 \leq k \leq 13$ . 91d:05055
- Ivanov, Andrei Vladimirovich see Ivanov, Aleksandr Anatol'evich, 91d:05055 and Brouwer, Andries E.; et al., 91f:05120
- Johnson, Norman Lloyd<sup>1</sup> (with Pomareda, Rolando) A maximal partial flock of deficiency one of the hyperbolic quadric in  $PG(3, 9)$ . 91k:51011
- Jungnickel, Dieter Latin squares, their geometries and their groups. A survey. 91d:05023
- Khrantsov, D. G. see Mazurov, Viktor Danilovich, 91f:05064
- Kleidman, Peter B. The finite flag-transitive linear spaces with an exceptional automorphism group. 91h:51014
- Klin, M. Kh. see Brouwer, Andries E.; et al., 91f:05120
- Knör, Reinhard (with Willems, Wolfgang) The automorphism groups of generalized Reed-Muller codes. 91h:94030
- Korchmáros, Gábor see Billotti, Mauro, 91c:51008; 91d:51009 and 91c:51003
- Kramer, Erika see Horvát-Baldasar, K.; et al., 91h:51014
- Kranakis, Evangelos see Clote, Peter G., 91m:68056
- Křiz, Igor Permutation groups in Euclidean Ramsey theory. 91j:05100
- Labelle, Jacques see Constantineau, Ivan, 91c:05010
- Le Conte de Poly-Barbut, Claude Automorphismes du permutobdre et votes de Condorcet. (English summary) [Automorphisms of the permutohedron and Condorcet's voting] 91j:90016
- Marchenkov, S. S. Classification of algebras with an alternating group of automorphisms. (Russian) 91c:00005
- Matulić-Bedenić, I. see Horvát-Baldasar, K.; et al., 91h:51014
- Mazurov, Viktor Danilovich (with Khrantsov, D. G.) Automorphism groups of finite regular cubic graphs. 91f:05064
- Pomareda, Rolando see Johnson, Norman Lloyd<sup>1</sup>, 91k:51011
- Praeger, Cheryl E. see Royle, Gordon F., 91a:68216
- Royle, Gordon F. (with Praeger, Cheryl E.) Constructing the vertex-transitive graphs of order 24. 91a:68216

- Sutherland, David C. The automorphism groups of the strong Bruhat order of the Coxeter groups  $B_n$  and  $D_n$ . 91d:20039
- Ternovskii, V. A. Plane algebraic curves with the group of symmetries of a regular  $r$ -polygon. (Russian) 91h:51022
- Van Maldeghem, H. Automorphisms of nonclassical triangle buildings. 91h:51013
- Völklein, Helmut  $PSL_2(q)$  and extensions of  $Q(x)$ . 91h:12013
- Willems, Wolfgang see Knör, Reinhard, 91h:94030
- Wu, Barbara The representation of Sylow 2-subgroups of permutation groups by automorphisms of some universal algebras. (Polish. English summary) 91g:20027
- (with Wu, Henryk) Representations of some class of groups by automorphisms of universal algebras with one fundamental operation of finite arity. (Polish. English summary) 91g:20028
- Wu, Henryk see Wu, Barbara, 91g:20028
- Yoshizawa, Satoshi A locally polar geometry associated with the group HS. 91h:51020
- Yoshizawa, Mitsuo Graphs with given group. 91g:05065
- Zhang, Hong Point-color-symmetric graphs with a prime number of vertices. 91h:05063

#### 20B27 Infinite automorphism groups [see also 12F10]

##### Items with secondary classifications in 20B27

- Baltag, I. A. Properties of symmetry elements of  $n$ -dimensional lattices of Minkowski and Euclidean spaces. (Not in MR)
- Behrendt, Gerhard Automorphism groups of comparability and covering graphs. 91j:20007
- Biggs, Norman L. A proof of Serre's theorem. 91a:05031
- van Duven, Eric K. The automorphism group of  $\mathcal{P}(\omega)/\text{fin}$  need not be simple. 91a:03100
- Maroli, John A. Representation of tree permutations by words. 91c:06004
- Roitman, Judith  $\omega!$  can be a nontrivial automorphism group. 91j:03068
- Trofimov, V. I. Some asymptotic characteristics of groups. 91g:05064

#### 20B30 Symmetric groups

- Bi, Jian Xing A character property of symmetric groups. (Chinese) 91j:20014
- Gu, Wen Xiang Relations among groups  $GL_n(I)$ ,  $G_n$  and  $S_n$ . (Not in MR)
- Myslovskikh, V. I. Paranormality of the symmetric group in wreath products. 91c:20007
- Rong, Yao Tang Irreducible generating systems of the compound symmetric group  $S_{n,J}$  and the compound alternating group  $A_{n,J}$ . (Chinese) 91c:20004
- Serre, Jean-Pierre Relevements dans  $\tilde{S}_n$ . (English summary) [ $\tilde{S}_n$ -liftings] 91m:20010

##### Items with secondary classifications in 20B30

- Eastman, Mark (with Mason, Geoffrey) Spread-invariant representations of symmetric groups. 91c:20003
- Egicioglu, Ömer (with Rummel, Jeffrey B.) The monomial symmetric functions and the Frobenius map. 91d:05090
- Ésik, Zoltán On  $\alpha$ -products of automata. 91f:68155
- Kokosinski, Zbigniew On generation of permutations through decomposition of symmetric groups into cosets. (Not in MR)
- Lascox, Alain (with Schützenberger, Marcel-Paul) Noncommutative Schubert polynomials. 91a:14033
- Mason, Geoffrey see Eastman, Mark, 91c:20003
- Patras, Frédéric Filtration du groupe des polytopes et  $\lambda$ -structure du groupe symétrique. (English summary) [Filtration of the group of polytopes and  $\lambda$ -structure on the symmetric group] 91g:52010
- Rummel, Jeffrey B. see Egicioglu, Ömer, 91d:05090
- Schützenberger, Marcel-Paul see Lascox, Alain, 91a:14033
- Wang, Tian Mu Simple proofs of some theorems on permutations. (Chinese) 91h:05006 (Zelinski, A. V.) see Lascox, Alain, 91a:14033
- Zhou, Chen A permutation-generating algorithm. 91c:68104

#### 20B35 Subgroups of symmetric groups

- Babai, László The probability of generating the symmetric group. 91a:20007
- Bruyns, Peter Approximate centralizers in the group of homeomorphisms of the rational numbers. 91h:20005
- Cameron, Peter J. (with Solomon, Ron; Turull, Alexandre) Chains of subgroups in symmetric groups. 91a:20008
- Dixon, John D. Most finitely generated permutation groups are free. 91c:20005
- Genov, Georgi K. (with Siderov, Plamen N.) Some properties of the Grigorchuk group and its group algebra over a field of characteristic two. (Russian) 91h:20006
- Siderov, Plamen N. see Genov, Georgi K., 91h:20006
- Solomon, Ron see Cameron, Peter J.; et al., 91a:20008
- Turull, Alexandre see Cameron, Peter J.; et al., 91a:20008
- Wu, Barbara The representation of Sylow 2-subgroups of permutation groups by automorphisms of some universal algebras. (Polish. English summary) 91g:20027

##### Items with secondary classifications in 20B35

- Berkovich, T. Ya. (with Berkovich, Ya. G.) Subgroups of the symmetric group. (Russian) 91j:20004
- Berkovich, Ya. G. see Berkovich, T. Ya., 91j:20004
- Cárdenas, Humberto (with Luis, Emilio) On the integral cohomology of a Sylow subgroup of the symmetric group. 91b:20070
- Luis, Emilio see Cárdenas, Humberto, 91b:20070
- Pálfi, P. P. Bounds for linear groups of odd order. 91h:20068
- Pieprzyk, József P. (with Zhang, Xian Mo) Permutation generators of alternating groups. (see 91h:94002)
- Ustimenko, V. A. see Zhdan-Pushkin, V. V., 91m:20069
- Zhang, Xian Mo see Pieprzyk, József P., (91h:94002)
- Zhdan-Pushkin, V. V. (with Ustimenko, V. A.) Maximality of finite classical groups acting on totally isotropic subspaces. 91m:20069



## 20B40 Computational methods

- Butler, Gregory Permutation groups and  $p$ -groups. 91d:20002  
 Sims, Charles C. Computing the order of a solvable permutation group. 91m:20011

Items with secondary classifications in 20B40

- Schmalz, Bernd Verwendung von Untergruppenleitern zur Bestimmung von Doppelseitenklassen. [Use of subgroup ladders for the determination of double cosets] 91c:20001

## 20B99 None of the above, but in this section

- Ganyushkin, A. G. (with Zhanabergenova, G. K.) Nonstandard permutation representations of monomial groups. (Russian) 91j:20015  
 Higman, Graham On a certain infinite permutation group. 91f:20006  
 Zhanabergenova, G. K. see Ganyushkin, A. G., 91j:20015

Items with secondary classifications in 20B99

- Bailey, R. A. (with Rowley, C. A.) General balance and treatment permutations. 91d:05014  
 Cohen, Jo-Ann D. (with Koh, Kwangil) Half-transitive group actions in a compact ring. 91d:16077  
 Foata, Dominique (with Zeilberger, Doron) Denert's permutation statistic is indeed Euler-Mahonian. 91h:05016  
 Koh, Kwangil see Cohen, Jo-Ann D., 91d:16077  
 Laczkovich, M. Invariant signed measures and the cancellation law. 91i:28012  
 Lawther, Ross Ian Some coset actions in  $G_2(q)$ . 91j:20114  
 Morozov, A. S. Elementary properties of groups of recursive permutations. 91h:03062  
 — On theories of classes of groups of recursive permutations. (Russian) 91c:03038  
 Rowley, C. A. see Bailey, R. A., 91d:05014  
 Sitnik, V. M. Minimal permutation representation of Janko's finite simple group  $J_4$ . 91c:20032  
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- Chen, Jin Quan ★ Group representation theory for physicists. 91h:81047  
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- Beneish, Esther Invertible modules. 91b:20006  
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- Okuyama, Tetsuro (with Sasaki, Hiroki) Evens' norm map and Serre's theorem on the cohomology algebra of a  $p$ -group. 91a:20010

- Ponomarenko, I. N. Imprimitivity of a class of  $S$ -rings. (Russian) 91k:20012

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- On the conjectures concerning units in  $p$ -group algebras. 91h:20009

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- Artamonov, V. A. (with Bovdi, A. A.) Integral group rings: groups of invertible elements and classical  $K$ -theory. (Russian) 91c:16028  
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- Bovdi, V. A. Normal twisted group rings. (Russian. English summary) 91h:20004  
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- Hill, Paul (with Ullery, William) A note on a theorem of May concerning commutative group algebras. 91b:20008
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- Moszkowski, Paul Généralisation d'une formule de Solomon relative à l'anneau de groupe d'un groupe de Coxeter. (English summary) [A generalization of a formula due to Solomon concerning the group ring of a Coxeter group] 91b:20010
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- Stojnowski, Andrzej On Bass' "strong conjecture" about projective modules. 91g:20007
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- Abd el Moneim, Z. M. On the left ideals of a crossed group algebra over finite fields. 91c:16030
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- Karpilovsky, Gregory Units of commutative group algebras. 91d:16062
- Kirillov, A. A. A remark on the Gelfand-Tsetlin patterns for symplectic groups. 91e:22005
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- McIver, Annabelle Finitely generated non-Hopf modules. 91f:16034
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- Platonov, V. P. (with Benyash-Krivets, V. V.) Character rings of representations of finitely generated groups. (Russian) 91m:20064
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- Casacuberta, Carles (with Hilton, Peter) On the extended genus of finitely generated abelian groups. 91j:20089
- Dugas, Manfred (with Göbel, Rüdiger) Torsion-free nilpotent groups and  $E$ -modules. 91g:20054
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- Lennox, John C. (with Neumann, Peter M.; Wiegold, James) Nilpotent subgroups and the hypercentre of infinite soluble groups. 91c:20048
- Maier, Berthold J. On nilpotent groups of exponent  $p$ . 91b:20046
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- Lennox, John C. (with Mohammadi Hassanabadi, A.; Stewart, A. G. R.; Wiegold, James) Nilpotent extensibility and centralizers in infinite 2-groups. 91g:20058
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- Shapiro, Michael David A geometric approach to the almost convexity and growth of some nilpotent groups. 91d:20035
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- Kurdachenko, L. A. (with Goretskii, V. E.) Groups with weak minimality and maximality conditions for subgroups that are not normal. 91g:20056
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- Doyle, Peter G. (with McMullen, Curt) Solving the quintic by iteration. 91d:12004
- Endimioni, Gérard Une caractérisation de certaines variétés de groupes. (English summary) [A characterization of certain group varieties] 91m:20042
- Grunberg, Karl W. Integer valued functions on the integers. 91b:11005
- Heislbeitz, Hans Peter (with Mutzbauer, Otto) Invariante Typen in torsionsfreien, auflösbaren Gruppen endlichen Ranges. [Invariant types in torsion-free solvable groups of finite rank] 91d:20036
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- Franciosi, Silvana (with de Giovanni, Francesco; Tomkinson, M. J.) Groups with polycyclic-by-finite conjugacy classes. (Italian summary) 91f:20046
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- Collins, Donald J. (with Gilbert, N. D.) Structure and torsion in automorphism groups of free products. 91h:20047
- Corsi Tani, Gabriella Finite  $p$ -groups with nilpotent automorphism group. (Italian. English summary) 91h:20055
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- Gilbert, N. D. *see* Collins, Donald J., 91h:20047
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- Dugas, Manfred (with Göbel, Rüdiger) Torsion-free nilpotent groups and  $E$ -modules. 91g:20054
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- Schur, Susan E. Controlling conjugacy classes in embeddings of locally finite groups. 91i:20063
- (Wiegold, James) *see* Kostrikin, Aleksei Ivanovich, 91i:20038
- Zelmanov, E. I. Solution of the restricted Burnside problem for groups of odd exponent. 91i:20037

## Items with secondary classifications in 20F50

- Atamas, V. V. Groups all of whose non-totally factorizable subgroups have primary supplement. 91g:20039
- Genov, Georgi K. (with Siderov, Plamen N.) Some properties of the Grigorchuk group and its group algebra over a field of characteristic two. (Russian) 91h:20006
- Hartley, Brian (with Isaacs, I. M.) On characters and fixed points of coprime operator groups. 91g:20030
- Hickin, Kenneth K. (with Phillips, Richard E.) Universal locally finite extensions of groups. 91m:20046
- Isaacs, I. M. *see* Hartley, Brian, 91g:20030
- Kuzennyi, N. F. (with Semko, N. N.) Meta-Hamiltonian groups with elementary commutator subgroup of rank two. 91c:20047
- Ofshanskii, A. Yu. *★* Геометрия определяющих соотношений в группах. (Russian) [The geometry of defining relations in groups] 91i:20035
- Pettet, Martin R. Almost-nilpotent periodic groups as automorphism groups. 91f:20047
- Phillips, Richard E. *see* Hickin, Kenneth K., 91m:20046
- Pagliai, Orazio On outer automorphisms of Černikov  $p$ -groups. 91f:20048
- Rozhkov, A. V. Stabilizers of sequences in Alëshin-type groups. 91d:20034
- Semko, N. N. *see* Kuzennyi, N. F., 91c:20047
- Sesekin, N. F. (with Shumyatskii, P. V.) A characterization of an infinite Chernikov group. 91c:20019
- Shumyatskii, P. V. Groups with regular elementary 2-groups of automorphisms. 91i:20031
- *see also* Sesekin, N. F., 91c:20019
- Siderov, Plamen N. *see* Genov, Georgi K., 91h:20006
- Stonehewer, Stewart E. (with Zacher, Giovanni) Dual-standard subgroups of finite and locally finite groups. 91k:20030
- Sushchanskii, V. I. Wreath products and periodic factorizable groups. 91e:20023
- Zacher, Giovanni *see* Stonehewer, Stewart E., 91k:20030

## 20F55 Coxeter groups [see also 22E40]

- Dyer, Matthew Reflection subgroups of Coxeter systems. 91j:20100
- Solomon, Louis The number of irreducible representations of a finite Coxeter group. 91j:20101
- Sutherland, David C. The automorphism groups of the strong Bruhat order of the Coxeter groups  $B_n$  and  $D_n$ . 91d:20039
- Terao, Hiroaki On a certain invariant of a finite unitary reflection group. 91d:20040
- Volschchenko, Yu. V. Computer calculation of subschemes of relation schemes of Coxeter groups of type  $B_n$ . (Russian) 91m:20060



## Items with secondary classifications in 20F55

- Deodhar, Vinay V. A note on subgroups generated by reflections in Coxeter groups. 91c:20063
- Douglass, J. Matthew An inversion formula for relative Kazhdan-Lusztig polynomials. 91c:20064
- Fakolas, A. P. The Lusztig isomorphism for Hecke algebras of dihedral type. 91d:20042
- Some properties of Lusztig's isomorphism. 91g:20065
- Guy, Jean-Pierre Sur des groupes isomorphes au groupe de multiplication d'une boucle. (English summary) [Groups isomorphic to the multiplication group of a loop] 91h:20091
- Pride, Stephen J. (with Stöhr, Ralph) The (co)homology of aspherical Coxeter groups. 91k:20058
- Ruzmanov, O. P. Examples of nonarithmetic crystallographic Coxeter groups in  $n$ -dimensional Lobachevskii space when  $6 \leq n \leq 10$ . (Russian) 91m:20070
- Shi, Jian Yi The joint relations and the set  $\mathcal{P}_1$  in certain crystallographic groups. 91c:20055
- Stöhr, Ralph *see* Pride, Stephen J., 91k:20058

## 20F60 Ordered groups [See mainly 06F15]

## Items with secondary classifications in 20F60

- (Glass, A. M. W.) *see* Lattice-ordered groups, 91i:06017
- (Holland, W. Charles) *see* Lattice-ordered groups, 91i:06017

## Items listed otherwise than by author

- Lattice-ordered groups ★ Lattice-ordered groups. 91i:06017

## 20F99 None of the above, but in this section

- Blyth, Russell D. (with Robinson, Derek J. S.) Solution of the solubility problem for rewritable groups. 91j:20102
- Brailovskii, L. V. (with Freiman, Gregory) On a product of finite subsets in a torsion-free group. 91c:20052
- Freiman, Gregory *see* Brailovskii, L. V., 91c:20052
- Horadam, K. J. The cup product for a graph product of combinatorially aspherical groups. 91g:20064
- Levine, J. P. Algebraic closure of groups. (see 91e:20001)
- Piochi, Brunetto (with Pirillo, Giuseppe) A proof of a theorem by G. Higman. 91b:20052
- Pirillo, Giuseppe *see* Piochi, Brunetto, 91b:20052
- Robinson, Derek J. S. *see* Blyth, Russell D., 91j:20102

## Items with secondary classifications in 20F99

- Clay, James R. *see* Fang, Yilan, 91f:68157
- Fang, Yilan (with Clay, James R.) Computer programs for investigating syntactic near-rings of finite group-semiautomata. 91f:68157
- Geisert, Uwe Über Normalreihen in schiefaffinen Räumen. [On normal series in skew-affine spaces] 91i:51011
- Hida, Takeyuki Functionals of Brownian motion. 91i:60205
- Kollihar, Milan On a class of median groups. 91j:06038

## 20Gxx Linear algebraic groups (classical groups)

{For arithmetic theory, see 11E57, 11H06; for geometric theory, see 14Lxx, 22Exx; for other methods in representation theory, see 15A30, 22E45, 22E46, 22E47, 22E50, 22E55.}

## Items with secondary classifications in 20Gxx

- Zaleskii, A. E. Linear groups. (Russian) 91m:20003

## 20G05 Representation theory

Adamovich, A. M. Structure of some indecomposable representations of  $GL_n$  over a field of finite characteristic. (Russian) (see 91k:00013)

- Asai, Teruaki On the twisting operators on the finite classical groups. (see 91m:00023)
- Bai, Yuan Hual On intertwining homomorphisms of Weyl modules. (Chinese) 91h:20053
- Bannai, Eliechi (with Shen, Hao; Song, Sung-Yell) Character tables of the association schemes of finite orthogonal groups acting on the nonisotropic points. 91k:20047
- Benyash-Krivets, V. V. *see* Platonov, V. P., 91m:20064
- Cline, Ed On injective modules for infinitesimal algebraic groups. II. 91h:20061
- Digne, François (with Michel, Jean) On Lusztig's parametrization of characters of finite groups of Lie type. (French summary) 91d:20041
- Dipper, Richard (with James, Gordon)  $q$ -tensor space and  $q$ -Weyl modules. 91m:20061
- Dyer, M. J. (with Lehrer, G. I.) On positivity in Hecke algebras. 91h:20062
- Fakolas, A. P. The Lusztig isomorphism for Hecke algebras of dihedral type. 91d:20042
- Some properties of Lusztig's isomorphism. 91g:20065
- Fleischmann, Peter (with Jantzen, Jens Carsten) Simple periodic modules of twisted Chevalley groups. 91c:20053
- Gordeev, N. L. Coranks of elements of linear groups and the complexity of algebras of invariants. 91h:20063
- Haastert, Burkhard (with Jantzen, Jens Carsten) Filtrations of the discrete series of  $SL_2(q)$  via crystalline cohomology. 91d:20043
- Hanlon, Phil (with Wales, David) On the decomposition of Brauer's centralizer algebras. 91a:20041a
- (with Wales, David) Eigenvalues connected with Brauer's centralizer algebras. 91a:20041b
- Hiss, Gerhard The number of trivial composition factors of the Steinberg module. 91a:20042
- Regular and semisimple blocks of finite reductive groups. 91h:20064
- Horvath, Jozsef Weight spaces of invariants of certain unipotent group actions. 91g:20066
- James, Gordon *see* Dipper, Richard, 91m:20061
- Jantzen, Jens Carsten *see* Fleischmann, Peter, 91c:20053 and Haastert, Burkhard, 91d:20043
- van der Kallen, Wilberd Longest weight vectors and excellent filtrations. 91a:20043
- Kasai, Shin-ichi A classification of a certain class of reductive prehomogeneous vector spaces. II. 91d:20044
- Kimura, Tatsuo A classification theory of prehomogeneous vector spaces. 91g:20067
- Laumon, Gérard Faisceaux caractères (d'après Lusztig). [Character sheaves (after Lusztig)] 91m:20062
- Lehrer, G. I. *see* Dyer, M. J., 91h:20062
- Lusztig, George Green functions and character sheaves. 91c:20054
- Mars, J. G. M. (with Springer, Tonny A.) Character sheaves. 91a:20044
- Mathies, Olivier Filtrations de  $G$ -modules. (English summary) [Filtrations of  $G$ -modules] 91h:20054
- Bonnes bases pour les  $G$ -modules. (English summary) [Good bases for  $G$ -modules] 91d:20045
- Good bases for  $G$ -modules. 91j:20103
- Michel, Jean *see* Digne, François, 91d:20041
- Müller, Iris Formes quadratiques et classification d'orbites pour une classe d'espaces prehomogènes. (English summary) [Quadratic forms and classification of orbits for prehomogeneous vector spaces] 91m:20063
- Oliveira-Martins, M. Teresa F. On homomorphisms between Weyl modules for hook partitions. 91d:20046
- Platonov, V. P. (with Benyash-Krivets, V. V.) Character rings of representations of finitely generated groups. (Russian) 91m:20064
- Polo, Patrick Un critère d'existence d'une filtration de Schubert. (English summary) [A criterion for the existence of a Schubert filtration] 91b:20055
- Variétés de Schubert et excellentes filtrations. (English summary) [Schubert varieties and excellent filtrations] 91b:20056
- Proctor, Robert A. A Schensted algorithm which models tensor representations of the orthogonal group. 91a:20045
- A generalized Berle-Schensted algorithm and conjectured Young tableaux for intermediate symplectic groups. 91h:20065
- Shen, Hao *see* Bannai, Eliechi et al., 91k:20047
- Shi, Jian Yi The joint relations and the set  $\mathcal{P}_1$  in certain crystallographic groups. 91c:20055
- Shoji, Toshiaki Geometry of orbits and Springer correspondence. 91h:20057
- Smith, Stephen D. (with Völklein, Helmut) A geometric presentation for the adjoint module of  $SL_3(k)$ . 91e:20033a
- Quadratic action and the natural module for  $SL_2(k)$ . 91e:20034
- Song, Sung-Yell *see* Bannai, Eliechi et al., 91k:20047
- Springer, Tonny A. *see* Mars, J. G. M., 91a:20044
- Ustimenko, V. A. Linear interpretation of the geometries of flags of Chevalley groups. 91h:20066
- Völklein, Helmut On the geometry of the adjoint representation of a Chevalley group. 91e:20033b
- *see also* Smith, Stephen D., 91e:20033a
- Wales, David *see* Hanlon, Phil, 91a:20041a and 91a:20041b
- Wang, Jian Pan Notes on some topics in the representation theory of linear algebraic groups. 91g:20068
- Xi, Nan Hua The based ring of the lowest two-sided cell of an affine Weyl group. 91j:20104
- Ye, Jia Chen Extensions of simple modules for the group  $Sp(4, K)$ . II. 91j:20105b
- Extensions of simple modules for the group  $Sp(4, K)$ . 91j:20105a

## Items with secondary classifications in 20G05

- Alperin, J. L. (with Fong, Paul) Weights for symmetric and general linear groups. 91h:20014
- Bai, Yuan Hual A vanishing property for the higher  $G/B$  cohomology of type  $E$ . (Chinese) 91j:20106
- Blind, Bruno Distributions zeta à plusieurs variables associées aux algèbres de Jordan simples euclidiennes. (English summary) [Zeta distributions in several variables associated with simple Euclidean Jordan algebras] 91k:32034
- Boffi, Giandomenico Characteristic-free decomposition of skew Schur functors. 91h:22017
- Borho, W. (with Brylinski, Jean-Luc; MacPherson, R.) ★ Nilpotent orbits, primitive ideals, and characteristic classes. 91d:17012
- Brylinski, Jean-Luc *see* Borho, W., et al., 91d:17012
- Cabanes, Marc A criterion for complete reducibility and some applications. 91c:20027
- Cline, Ed (with Parshall, Brian J.; Scott, Leonard L.) Integral and graded quasi-hereditary algebras. I. 91c:16009
- Darafsheh, M. R. On some characters of certain linear groups. 91a:20014
- Donkin, Stephen The normality of closures of conjugacy classes of matrices. 91j:14040
- Du, Jie Cells in the affine Weyl group of type  $D_n$ . 91a:20052
- Dvorski, A. L. Representations of parabolic subgroups of the symplectic group. 91c:22009
- Fong, Paul *see* Alperin, J. L., 91h:20014
- Ginzburg, V. A. Admissible modules on a symmetric space. 91c:22030
- Gleason, J. J. On the homology classes for the components of some fibres of Springer's resolution. 91f:22028
- Gyoja, Akihiko A counterexample in the theory of prehomogeneous vector spaces. 91c:14057
- Construction of invariants. 91k:22035
- Hashimoto, Ki-ichiro (with Hori, Akira) Selberg-Ihara's zeta function for  $p$ -adic discrete groups. 91g:11053
- Heckman, G. J. Hecke algebras and hypergeometric functions. 91d:33033
- Hori, Akira *see* Hashimoto, Ki-ichiro, 91g:11053
- Howe, Roger (with Moy, Allen) Hecke algebra isomorphisms for  $GL(n)$  over a  $p$ -adic field. 91f:22031
- Howlett, R. B. (with Lehrer, G. I.) On the integral group algebra of a finite algebraic group. 91h:20063
- Ismail Amantegui, G. Branching rules for the Weyl group  $W(D_n)$ . 91h:20012
- James, Gordon The decomposition matrices of  $GL_n(q)$  for  $n \leq 10$ . 91c:20024

- Klink, W. H. (with Ton-That, Tuong) Representations of  $S_n \times U(N)$  in repeated tensor products of the unitary groups. 91f:22026
- Koike, Kazuhiko (with Terada, Itaru) Young diagrammatic methods for the restriction of representations of complex classical Lie groups to reductive subgroups of maximal rank. 91a:22013
- Krop, Leonid The associated graded algebra of a group algebra. 91b:16030
- Lambe, Larry A. (with Srinivasan, Bhamu) A computation of Green functions for some classical groups. 91f:20041
- Lee, In-Sok On the lifting theory of  ${}^3D_4(q^3)$ . 91b:20024
- Lehrer, G. I. see Howlett, R. B., 91b:20063
- Lin, Zong Zhu Structure of cohomology of line bundles on  $G/B$  for semisimple groups. 91j:20107
- Littelmann, Peter A generalization of the Littlewood-Richardson rule. 91f:22023
- Lusztig, George Quivers, perverse sheaves, and quantized enveloping algebras. 91m:17018
- MacPherson, R. see Borho, W.; et al., 91d:17012
- Moy, Allen see Howe, Roger, 91f:22031
- Murase, Atsushi (with Sugano, Takashi) A note on zeta functions associated with certain prehomogeneous affine spaces. 91b:11063
- Okaiński, Jan (with Putcha, Mohan S.) Complex representations of matrix semigroups. 91c:20047
- Ozeki, Ikuzo On the microlocal structure of the regular prehomogeneous vector space associated with  $SL(5) \times GL(4)$ . 91s:20065
- Parshall, Brian J. (with Wang, Jian Pan) Quantum linear groups. 91g:16028
- see also Cline, Ed; et al., 91c:16009
- Putcha, Mohan S. see Okaiński, Jan, 91c:20047
- Rousseau, Guy Le groupe fondamental de certains espaces d'orbites régulières de groupes de Weyl affines. [The fundamental group of some regular orbit spaces of affine Weyl groups] 91f:20039
- Schlicker, Steven J. Young diagrammatic methods in the homology of groups. 91f:22029
- Scott, Leonard L. see Cline, Ed; et al., 91c:16009
- Slodowy, Peter A new  $A$ - $D$ - $E$  classification (after A. Capelli [Cappelli], C. Itzykson, J. B. Zuber). 91m:17008
- Springer, Tony A. Aktionen reductiver Gruppen auf Varietäten. [Actions of reductive groups on varieties] (see 91m:14074)
- Srinivasan, Bhamu see Lambe, Larry A., 91f:20041
- Sugano, Takashi see Murase, Atsushi, 91b:11063
- Sundaram, Shella Orthogonal tableaux and an insertion algorithm for  $SO(2n+1)$ . 91c:05199
- Tan, Lin Some recent developments in the Popov-Pommerening conjecture. 91g:14045
- Terada, Itaru see Koike, Kazuhiko, 91a:22013
- Tezuka, Michishige A note on the mod  $p$  cohomology of the general linear groups over a finite field. (see 91m:00023)
- Theo, D. Projective characters of rotation subgroups of exceptional Weyl groups. 91c:20012
- Timmesfeld, F. G. On the identification of natural modules for symplectic and linear groups defined over arbitrary fields. 91j:20110
- Ton-That, Tuong see Klink, W. H., 91f:22026
- Upadhyaya, B. S. On the principal indecomposable modules of the special linear group  $SL(2, F_q)$ . 91b:20064
- Tensor product of Weyl modules for the special linear group  $SL(2, k)$ . 91b:20065
- Vignéras, Marie-France Formal degree and existence of stable arithmetic lattices of cuspidal representations of  $p$ -adic reductive groups. 91b:22032
- Vilklein, Helmut On extensions between simple modules of a Chevalley group. 91b:20021
- Wang, Jian Pan see Parshall, Brian J., 91g:16028
- Zaleski, A. E. A fragment of the decomposition matrix of the special unitary group over a finite field. 91d:20012

## 20G10 Cohomology theory

- Andersen, Henning Haahr A new proof of old character formulas. 91d:20047
- Bai, Yuan Hual A vanishing property for the higher  $G/B$  cohomology of type  $E$ . (Chinese) 91j:20106
- Bettley, Stanislaw Homological stability for  $O_{n,n}$  over semi-local rings. 91c:20035
- Crane, Ronni P. Cohomology rings of infinitesimal unipotent subgroups of  $SL_n(k)$ . 91f:20052
- Kaneda, Masaharu (with Shimada, Nobuo; Tezuka, Michishige; Yagita, Nobuaki) Cohomology of infinitesimal algebraic groups. 91b:20048
- Lin, Zong Zhu Structure of cohomology of line bundles on  $G/B$  for semisimple groups. 91j:20107
- Shimada, Nobuo see Kaneda, Masaharu; et al., 91b:20048
- Tezuka, Michishige see Kaneda, Masaharu; et al., 91b:20048
- Vilklein, Helmut 1-cohomology of Chevalley groups. 91b:20058
- Yagita, Nobuaki see Kaneda, Masaharu; et al., 91b:20048

## Items with secondary classifications in 20G10

- Lehrer, G. I. (with Shoji, Toshiaki) On flag varieties, hyperplane complements and Springer representations of Weyl groups. 91b:20050
- Lindsay, J. M. (with Parthasarathy, Kalyanapuram Rangachari) Cohomology of power sets with applications in quantum probability. 91b:46115
- Nisnevich, Ye. A. The completely decomposed topology on schemes and associated descent spectral sequences in algebraic  $K$ -theory. 91c:19004
- Parthasarathy, Kalyanapuram Rangachari see Lindsay, J. M., 91b:46115
- Polo, Patrick Variétés de Schubert et excellentes filtrations. (English summary) [Schubert varieties and excellent filtrations] 91b:20056
- Shoji, Toshiaki see Lehrer, G. I., 91b:20050
- Wang, Jian Pan Notes on some topics in the representation theory of linear algebraic groups. 91g:20068
- Ye, Jia Chen Extensions of simple modules for the group  $Sp(4, K)$ . II. 91j:20105b
- Extensions of simple modules for the group  $Sp(4, K)$ . 91j:20105a

## 20G15 Linear algebraic groups over arbitrary fields

- Azad, H. (with Barry, Michael J. J.; Seitz, Gary M.) On the structure of parabolic subgroups. 91d:20048
- Barry, Michael J. J. see Azad, H.; et al., 91d:20048
- Borovik, A. V. Jordan subgroups of simple algebraic groups. 91j:20108
- Batum, Alexandru Dérivations sur les groupes algébriques. (English summary) [Derivations on algebraic groups] 91d:20049
- Chen, Ye<sup>2</sup> Homomorphisms of two-dimensional linear groups. 91b:20067
- King, Oliver Subgroups of the special linear group containing the diagonal subgroup. 91c:20056
- Kotbaev, V. A. Subgroups of the group  $GL(2, Q)$  that contain a nonsplittable maximal torus. 91j:20109
- Li, Shang Zhi Overgroups of  $SL(n, K)$  in  $GL(n, F)$  ( $K \subset F$ ). (Chinese) 91b:20049
- Palfy, P. P. Bounds for linear groups of odd order. 91b:20068
- Saltman, David J. Invariant fields of linear groups and division algebras. 91f:20053
- Seitz, Gary M. see Azad, H.; et al., 91d:20048
- Semenov, A. A. see Vavilov, N. A., 91b:20060
- Timmesfeld, F. G. On the identification of natural modules for symplectic and linear groups defined over arbitrary fields. 91j:20110
- Groups generated by  $k$ -transvections. 91b:20059
- Tits, Jacques Strongly inner anisotropic forms of simple algebraic groups. 91g:20069
- Vavilov, N. A. Bruhat decomposition of two-dimensional transformations. 91c:20057
- (with Semenov, A. A.) Bruhat decomposition for long root tori in Chevalley groups. (Russian) 91b:20060
- Voigt, Detlef The algebraic infinitesimal groups of tame representation type. (French summary) 91j:20111
- Walter, John H. Rigid cyclic subgroups in Chevalley groups. I. 91j:20112
- Wang, Lu Qun Automorphisms of two-dimensional generalized degenerate orthogonal groups. (Chinese. English summary) (Not in MR)
- Weyman, Jerzy The equations of conjugacy classes of nilpotent matrices. 91g:20070

## Items with secondary classifications in 20G15

- Adamovich, A. M. Structure of some indecomposable representations of  $GL_n$  over a field of finite characteristic. (Russian) (see 91b:00013)
- Bekbaev, U. D. Some results connected with differential vector spaces. (Russian) 91c:20096
- Benediktovich, V. I. On the multiplicative group of the division ring of quaternions over the field of real algebraic functions of one variable. (Russian. English summary) 91a:11059
- Berele, Allan Matrices with involution and invariant theory. 91b:16052
- Boffi, Glandomenco Characteristic-free decomposition of skew Schur functors. 91b:22017
- Drobotenko, V. S. The structure of the homothety subgroup of the automorphism group of the general linear group over a field. (Russian. English summary) 91c:20050
- Green, J. A. On certain subalgebras of the Schur algebra. 91b:20019
- Kashevich, V. I. Normal structure of the special linear group of a Henselian discretely valued division algebra. (Russian) 91j:19003
- Kerby, William Eine Bemerkung über die Gruppen  $PGL(2, F)$ . [A remark on the groups  $PGL(2, F)$ ] 91b:2004a
- Kunyavskii, B. E. Three-dimensional algebraic tori. (Russian) 91g:14050
- Lai, Heng Lung Centralizer of a nilpotent element in a semisimple Lie algebra. 91b:17004
- Li, Shang Zhi The maximality of monomial subgroups of linear groups over division rings. 91b:20061
- Liebeck, Martin W. (with Seitz, Gary M.) Maximal subgroups of exceptional groups of Lie type, finite and algebraic. 91f:20032
- Monastyrnyi, A. P. (with Yanchevskii, V. I.) Whitehead groups of spinor groups. 91b:11043
- Raghunathan, M. S. Principal bundles on affine space and bundles on the projective line. 91b:11045
- Seitz, Gary M. Maximal subgroups of exceptional algebraic groups. 91g:20038
- see also Liebeck, Martin W., 91f:20032
- Teranishi, Yasuo Noncommutative invariant theory. 91c:15016
- Tits, Jacques Groupes associés aux algèbres de Kac-Moody. [Groups associated to Kac-Moody algebras] 91c:22034
- Yanchevskii, V. I. see Monastyrnyi, A. P., 91b:11043

## 20G20 Linear algebraic groups over the reals, the complexes, the quaternions

- Horvath, Josef On a problem of Pommerening in invariant theory. 91g:20071
- Lehrer, G. I. (with Shoji, Toshiaki) On flag varieties, hyperplane complements and Springer representations of Weyl groups. 91b:20050
- Ozeki, Ikuzo On the microlocal structure of the regular prehomogeneous vector space associated with  $SL(5) \times GL(4)$ . 91m:20065
- Shoji, Toshiaki see Lehrer, G. I., 91b:20050
- Tokuyama, Takeshi On a relation between the representations of general linear groups and a symplectic group. (see 91m:00023)
- Items with secondary classifications in 20G20
- Dyer, M. J. (with Lehrer, G. I.) On positivity in Hecke algebras. 91b:20062
- Harvey, Reese  $\star$  Spinors and calibrations. 91e:53056
- Joseph, Anthony On the characteristic polynomials of orbital varieties. 91d:17014
- Lehrer, G. I. see Dyer, M. J., 91b:20062
- (Leites, D. A.) see Onishchik, A. L., 91g:22001
- Onishchik, A. L. (with Vinberg, E. B.)  $\star$  Lie groups and algebraic groups. 91g:22001
- Paranjape, K. H. (with Srinivas, V.) Self-maps of homogeneous spaces. 91a:14034
- Sah, Chih-Han Homology of classical Lie groups made discrete. III. 91b:19002
- Spaltenstein, N. A note on the Kazhdan-Lusztig map for even orthogonal Lie algebras. 91b:17012
- Srinivas, V. see Paranjape, K. H., 91a:14034
- Vinberg, E. B. see Onishchik, A. L., 91g:22001
- Zhu, Xia Jie A finite spectrum unmixing set for  $\mathcal{E}^2(3, \mathcal{F})$ . 91e:93021

## 20G25 Linear algebraic groups over local fields and their integers

- Kantor, William M. (with Meixner, Thomas; Wester, M.) Two exceptional 3-adic affine buildings. 91d:20050
- Khandan, I. *see* Vavilov, N. A., 91c:20058
- Meixner, Thomas *see* Kantor, William M.; et al., 91d:20050
- Vavilov, N. A. (with Khandan, I.) Subgroups of the general linear group over a local field. 91c:20058
- Wester, M. *see* Kantor, William M.; et al., 91d:20050

Items with secondary classifications in 20G25

- Hashimoto, Ki-ichiro (with Hori, Akira) Selberg-Ihara's zeta function for  $p$ -adic discrete groups. 91g:11053
- Hori, Akira *see* Hashimoto, Ki-ichiro, 91g:11053
- Kantor, William M. Finite geometries via algebraic affine buildings. 91h:51011
- Lubotzky, Alexander Lattices of minimal covolume in  $SL_2$ : a non-Archimedean analogue of Siegel's theorem  $\mu \geq \pi/21$ . 91j:22010
- Pymen, R. J. Reduced  $C^*$ -algebra for reductive  $p$ -adic groups. 91a:46064

## 20G30 Linear algebraic groups over global fields and their integers

- Konyukh, V. S. Locally nilpotent linear groups of even degree. (Russian. English summary) 91g:20072
- Tavgen', O. I. Bounded generability of Chevalley groups over rings of  $S$ -integer algebraic numbers. 91c:20036

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- Bondarenko, A. A. On the maximality of arithmetic subgroups of indefinite orthogonal groups of type  $(D_r)$ . 91e:11041
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- Kiyachko, A. A. On the rationality of tori with cyclic splitting field. (Russian) 91m:11028
- Kobayashi, Ryoichi (with Kishibiki, Keiko; Naruki, Isao) Polygons and Hilbert modular groups. 91f:11035
- Kishibiki, Keiko *see* Kobayashi, Ryoichi; et al., 91f:11035
- Naruki, Isao *see* Kobayashi, Ryoichi; et al., 91f:11035
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- On the structure of algebraic groups over global fields. 91h:11030
- Voskresenskii, V. E. Arithmetic of algebraic groups and homogeneous spaces. (Russian) — Calculation of the volumes of some classical fundamental domains of a group of integer matrices. (Russian) 91m:22019

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- Cohen, Steve M. (with Smith, Stephen D.) A geometric presentation of the 26-dimensional module for  $F_4(q)$ . 91h:20072
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- Howlett, R. B. (with Lehrer, G. I.) On the integral group algebra of a finite algebraic group. 91h:20063
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- Kapitonova, Yu. V. *see* Gudvok, P. M.; et al., 91d:20054
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- Koca, Mehmet *see* Karsch, F., 91m:20067
- Lambe, Larry A. (with Srinivasan, Bhama) A computation of Green functions for some classical groups. 91h:20041
- Lawther, Ross Ian Some coset actions in  $G_2(q)$ . 91j:20114
- Lehrer, G. I. *see* Howlett, R. B., 91h:20063
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- Azad, H. (with Barry, Michael J. J.; Seitz, Gary M.) On the structure of parabolic subgroups. 91d:20048
- Barry, Michael J. J. *see* Azad, H.; et al., 91d:20048
- Cline, Ed On injective modules for infinitesimal algebraic groups. II. 91h:20061
- Cohen, Stephen D. Rational functions invariant under an orthogonal group. 91h:20068
- Deutzer, Ralf Projektive symplektische Gruppen  $PSp_4(p)$  als Galoisgruppen über  $\mathbb{Q}(t)$ . [Projective symplectic groups  $PSp_4(p)$  as Galois groups over  $\mathbb{Q}(t)$ ] 91h:20065
- Dipper, Richard On quotients of Hom-functors and representations of finite general linear groups. I. 91c:20015
- Felt, Paul (with Felt, Walter) The  $K$ -admissibility of  $SL(2, 5)$ . 91h:12012
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- Fleischmann, Peter (with Jantzen, Jens Carsten) Simple periodic modules of twisted Chevalley groups. 91c:20053
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- Haastert, Burkhard (with Jantzen, Jens Carsten) Filtrations of the discrete series of  $SL_2(q)$  via crystalline cohomology. 91d:20043
- Hannebauer, Torsten On nonabelian tensor squares of linear groups. 91c:20070
- Hiss, Gerhard (with Shamash, Josephine) 3-blocks and 3-modular characters of  $G_2(q)$ . 91h:20017
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- James, Gordon The decomposition matrices of  $GL_n(q)$  for  $n \leq 10$ . 91c:20024
- Janiszczak, Ingo (with Jantzen, Jens Carsten) Simple periodic modules over Chevalley groups. 91f:20010
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- Kleidman, Peter B. (with Liebeck, Martin W.) ★ The subgroup structure of the finite classical groups. 91g:20001
- Kondrat'ev, Anatoli Semenovich ★ Модулярные представления малых степеней конечных групп Лэвского типа. (Russian) [Modular representations of small degrees of finite groups of Lie type] 91a:20018
- Lee, In-Sok On the lifting theory of  ${}^3D_4(q^3)$ . 91h:20024
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- Smith, Stephen D. (with Volkin, Helmut) A geometric presentation for the adjoint module of  $SL(k)$ . 91c:2003a



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- Hée, Jean-Yves Construction de groupes tordus en théorie de Kac-Moody. (English summary) [Construction of twisted groups in Kac-Moody theory] 91e:20062  
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### 20H05 Unimodular groups, congruence subgroups [see also 11F06, 19B37, 22E40, 51F20]

- Sheingorn, Mark Hyperbolic reflections on Pell's equation. 91a:20050

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- Abe, Eichi Chevalley groups over commutative rings. 91a:20047  
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### 20H10 Fuchsian groups and their generalizations [see also 11F06, 22E40, 30F35, 32Nxx]

- Akbas, M. (with Singerman, D.) The normalizer of  $\Gamma_0(N)$  in  $\mathrm{PSL}(2, \mathbb{R})$ . 91j:20116  
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- Abikoff, William (with Haas, Andrew Howard) Nondiscrete groups of hyperbolic motions. 91h:22013  
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 Basmajian, Ara Constructing pairs of pants. 91g:57041  
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 Fine, Benjamin (with Rosenberger, Gerhard) Conjugacy separability of Fuchsian groups and related questions. 91m:20048

- Furusawa, Haruaki The exponent of convergence of Poincaré series of combination groups. 91m:30057

- Gehring, Frederick W. (with Martin, Gaven J.) Stability and extremality in Jørgensen's inequality. 91h:30067  
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 — On discrete Möbius groups in all dimensions: a generalization of Jørgensen's inequality. 91g:30049  
 — (with Skora, Richard K.) Group actions of the 2-sphere. 91e:57068  
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- Bédard, Robert Left V-cells for hyperbolic Coxeter groups. 91a:20051  
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 Greblle, D. (with Weigel, D.; Veyseyre, R.; Phan, Thérèse) Crystallography, geometry and physics in higher dimensions. VII. The different types of symbols of the 371 monoincommensurate superspace groups. 91c:20065  
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 Bercher, Richard E. Lattices like the Leech lattice. 91f:11046  
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- Carrière, Yves (with Dal'bo, Françoise) Généralisations du premier théorème de Bieberbach sur les groupes cristalllographiques. [Generalizations of Bieberbach's first theorem on crystallographic groups] 91h:22014
- Cedó, Ferran (with Llibre, Jaume) Symmetric central configurations of the spatial  $n$ -body problem. 91e:70031
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- Dal'bo, Françoise see Carrière, Yves, 91h:22014
- Dunkl, Charles F. Harmonic polynomials and peak sets of reflection groups. 91h:51015
- Dyer, Matthew Reflection subgroups of Coxeter systems. 91j:20100
- Ellers, Erich W. (with Malzan, Jerry) Solving the length problem for the special linear group over the quaternions. 91h:15013
- Glazer, A. M. see Burns, Gerald, 91c:82071
- Haase, R. W. see Kramer, Peter, (91a:52030)
- Hallat, Mohammad Q. On the isomorphism of regular symmetrysets. 91h:17013
- Weak regular symmetrysets. 91h:17014
- Hoare, A. H. M. Subgroups of N.E.C. groups and finite permutation groups. 91d:20055
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- Kramer, Peter (with Haase, R. W.) Group theory of icosahedral quasicrystals. (see 91a:52030)
- Krivovuchko, A. I. Invariants of infinite groups that are generated by reflections in lines. 91j:51022
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- Nilzeiki, Komajiro Special points of  $(2+1)$ -reducible quasilattices in three dimensions. 91k:52025
- Ruzmanov, O. P. Subgroups of reflections in Bianchi groups. 91g:11043
- Sadoc, Jean-François (with Mosseri, Rémy) A new method to generate quasicrystalline structures: examples in 2D tilings. (French summary) 91c:82073
- Scholz, Erhard ★ Symmetric—Gruppe—Dualität. (German) [Symmetry—group—duality] 91j:01029
- Shi, Jian Yi The joint relations and the set  $\mathcal{S}_i$  in certain crystallographic groups. 91c:20055
- Terao, Hiroaki On a certain invariant of a finite unitary reflection group. 91d:20040
- Theo, D. Projective characters of rotation subgroups of exceptional Weyl groups. 91c:20012
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- Klimenko, E. Ya. A class of the 2-generator subgroups of  $\text{PSL}(2, \mathbb{C})$ . 91a:20053
- Knyazeva, V. F. (with Mikhailik, G. V.) Expansion of a maximal abelian subgroup of a group of unitriangular matrices into a product of cyclic subgroups. (Russian) 91f:20057
- Kovács, L. G. (with Robinson, Geoffrey R.) Generating finite completely reducible linear groups. 91h:20042
- Mikhailik, G. V. see Knyazeva, V. F., 91f:20057
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- Shalheer, M. K. Reflective subgroups in Bianchi groups. 91j:20118
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- Grundhöfer, Theo see Cherlin, Gregory, et al., 91f:20002
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- Robinson, Geoffrey R. On linear groups. 91c:20011
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Bhutani, Kiran R. Stability of abelian groups in a topos of sheaves. 91m:18007

- Casacuberta, Carles (with Hilton, Peter) On the extended genus of finitely generated abelian groups. 91j:20089  
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 — Some isomorphisms of abelian groups involving the Tor functor. 91b:20072  
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## 20K45 Topological methods [see also 22A05, 22B05]

- Schinkel, Fritz Existence and number of maximal precompact topologies on abelian groups. 91j:20132

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- Casacuberta, Carles Localization of  $q$ -abelian groups. 91f:55004  
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## 20K99 None of the above, but in this section

- Iliopoulos, Costas S. Worst-case complexity bounds on algorithms for computing the canonical structure of infinite abelian groups and solving systems of linear Diophantine equations. 91a:20066

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- Benabdallah, Khalid (with Piché, Claude) Lattices related to torsion abelian groups. 91i:06010  
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 — (with Jouannaud, Jean-Pierre; Schmidt-Schauss, Manfred) Unification in Boolean rings and abelian groups [MR 91d:68105]. (see 91j:68006)  
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## 20Lxx Groupoids (i.e. small categories in which all morphisms are isomorphisms) {For sets with a single binary operation, see 20N02; for topological groupoids, see 22A22, 58H05.}

### 20L05 General theory

- Higgins, Philip J. (with Mackenzie, Kirill C. H.) Fibrations and quotients of differentiable groupoids. 91k:20062  
 Mackenzie, Kirill C. H. see Higgins, Philip J., 91k:20062

Items with secondary classifications in 20L05

- Heath, Philip R. (with Kamps, Klaus Heiner) Lifting colimits of (topological) groupoids and (topological) categories. 91d:18001  
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### 20L10 Connections with group theory

- Duskin, J. Free groupoids, trees, and free groups. 91k:20063

### 20L15 Connections with topology

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- Aof, Mohamed El-Saeed Abdel-Fattah ★ Topological aspects of holonomy groupoids. 91h:57014  
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### 20L17 Connections with category theory

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- Cegarra, Antonio M. (with Garzón, Antonio R.) Nonabelian cohomology of associative algebras. The 9-term exact sequence. (French summary) 91c:18015  
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- Albert, Claude (with Dazord, Pierre) Théorie des groupoides symplectiques. Chapitre I. Théorie générale des groupoides de Lie. [The theory of symplectic groupoids. Chapter I. The general theory of Lie groupoids] 91h:58127  
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 (Tomita, Hisao) see Proceedings: Symposium on the Semigroup Theory and its Related Fields, 91k:20005  
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- Ahsan, Javed Minimal prime ideals in semigroups without nilpotent elements. 91j:20146  
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- Howie, John M. Arithmetical aspects of semigroup embeddings. (see 91h:00030)  
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- Brown, Dennison R. (with Hildebrand, J. A.) Embedding compact  $t$ -semigroups into compact uniquely divisible semigroups. 91d:22003  
 Hildebrand, J. A. *see Brown, Dennison R., 91d:22003*  
 Piochi, Brunetto Solvability and the permutation property in inverse semigroups. 91h:20087

### 20M17 Regular semigroups

- Bonzini, Celestina (with Cherubini, Alessandra) Conditions similar to modularity on the congruence lattice of a regular  $\omega$ -semigroup. 91m:20088

- (with Cherubini, Alessandra; Piochi, Brunetto) The least commutative congruence on a simple regular  $\omega$ -semigroup. 91h:20088  
 Cherubini, Alessandra *see Bonzini, Celestina; et al., 91h:20088 and 91m:20088*  
 Murciano, M. G. Some properties of generalized Rees matrix semigroups. 91k:20072  
 Nambooripad, K. S. S. (with Pastijn, Francis J.) Amalgamation of regular semigroups. 91g:20093  
 Pastijn, Francis J. The kernel of an idempotent separating congruence on a regular semigroup. 91k:20073  
 — *see also Nambooripad, K. S. S., 91g:20093*  
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 Wang, Li Min<sup>3</sup> The  $E$ -disjunctive property of a class of regular semigroups. (Chinese) (Not in MR)  
 Yamada, Miyuki Some remarks on subdirect products of completely regular semigroups. 91j:20152

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- Blyth, T. S. (with Pinto, G. A.) Principally ordered regular semigroups. 91m:06026  
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 Migliorini, F. *see Lazzi, F., 91a:20073*  
 Petrich, Mario (with Reilly, Norman R.) Operators related to  $E$ -disjunctive and fundamental completely regular semigroups. 91k:20064  
 Pinto, G. A. *see Blyth, T. S., 91m:06026*  
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 — *see also Petrich, Mario, 91k:20064*

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- Goberstein, Simon M. Inverse semigroups with isomorphic partial automorphism semigroups. 91b:20089  
 Gould, Victoria Left orders in inverse  $\omega$ -semigroups. 91c:20093  
 Jones, Peter R. Inverse semigroups and their lattices of inverse subsemigroups. 91k:20074  
 Lawson, Mark V. The geometric theory of inverse semigroups. I.  $E$ -unitary inverse semigroups. 91j:20153  
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 Petrich, Mario (with Rankin, Stuart A.) Harmonic inverse semigroups. 91c:20094  
 Piochi, Brunetto Solvability and the permutation property in inverse semigroups. 91h:20087  
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 Yashina, E. Yu. Approximation of semigroups by inverse completely regular semigroups with respect to equality and belonging to a subsemigroup. (Russian) 91m:20089

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- FitzGerald, Desmond G. Inverse semigroups of bicongruences on algebras, particularly semilattices. 91i:08003  
 Goberstein, Simon M. Inverse semigroups with certain types of partial automorphism monoids. 91j:20154  
 Hancock, Rachel (with Raeburn, Iain) The  $C^*$ -algebras of some inverse semigroups. 91i:46061  
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- Kadourek, Jih (with Szendrei, Mária B.) A new approach in the theory of orthodox semigroups. 91k:20075  
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### 20M20 Semigroups of transformations, etc. [see also 47D03, 47H20, 54H15]

- Bredikhin, D. A. Involved RL-semigroups of quasi-single-valued binary relations. (Russian) 91i:20052  
 Diasamidze, Ya. I. One-sided zeros of subsets of a semigroup of binary relations. 91g:20094  
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 — Inverse semigroups with certain types of partial automorphism monoids. 91j:20154  
 Higgins, Peter M. Random products in semigroups of mappings. 91j:20155  
 Howie, John M. (with McFadden, Robert B.) Idempotent rank in finite full transformation semigroups. 91d:20076  
 — (with Lusk, Ewing L.; McFadden, Robert B.) Combinatorial results relating to products of idempotents in finite full transformation semigroups. 91j:20156  
 Kalmanovich, A. M. Isomorphisms of semigroups of homomorphisms of some classes of pairs of Berge graphs. (Russian) (see 91k:20006)  
 Laillement, Gérard J. (with McFadden, Robert B.) On the determination of Green's relations in finite transformation semigroups. 91k:20076  
 Levi, Inessa (with Williams, W. Wiley) Normal semigroups of partial transformations. I. 91j:20157  
 — Semigroups of constant binary relations. 91i:20053  
 Lusk, Ewing L. *see Howie, John M.; et al., 91j:20156*  
 Magill, K. D., Jr. (with Misra, Prabudh R.) Principal continuum congruences, regular  $\mathcal{F}$ -classes and local subsemigroups. 91c:20095

- McFadden, Robert B. *see* Howie, John M., 91d:20076; 91j:20156 and Lallement, Gérard J., 91k:20076
- Mills, Janet E. The inverse semigroup of partial symmetries of a convex polygon. 91j:20158
- Misra, Prabhudh R. *see* Magill, K. D., Jr., 91c:20095
- Shneperman, L. B. An additive semigroup of linear relations. (Russian. English summary) 91c:20046
- Trokhimenko, V. S. Transformation semigroups of invertible transformations. (Russian) 91k:20088
- Tucci, Ralph P. A decomposition theorem for a class of infinite transformation semigroups. 91f:20071
- Usenko, V. M. Semigroups of affine transformations of linear spaces. (Russian) 91g:20095
- Williams, W. Wiley *see* Levi, Inessa, 91j:20157
- Xu, Guang Wu The endomorphism semigroup of a finite distributive lattice. (Chinese. English summary) (Not in MR)

#### Items with secondary classifications in 20M20

- Adams, M. E. (with Gould, Matthew) Corrigendum: "Posets whose monoids of order-preserving maps are regular" [Order 6 (1989), no. 2, 195–201; MR 90m:06002]. 91j:06001
- Crails, Jans Correction: "Abstract description of data types and varieties of data algebras" [in *Algebra and discrete mathematics: the theoretical foundations of software* (Russian), 131–144, Latv. Gos. Univ., Riga, 1986; MR 88i:68072]. (Russian. English summary) 91h:68079
- Geberstein, Simon M. Inverse semigroups with isomorphic partial automorphism semigroups. 91h:20089
- Gould, Matthew *see* Adams, M. E., 91j:06001
- Hoehnke, Hans-Jürgen On certain classes of categories and monoids constructed from abstract Mal'cev clones. I. 91m:18005
- Knauer, Ulrich Endomorphisms of graphs. II. Various unretractive graphs. 91h:05059
- McKee, Rhonda L. Semigroups of functions on nearness spaces. 91f:54029
- Mogilevskii, M. G. Stable orders of the semigroup of all square matrices over an arbitrary field. (Russian) 91g:06014
- Nazarov, M. L. (with Neretin, Yu. A.; O'fshanskii, G. I.) Semi-groupes engendrés par la représentation de Weil du groupe symplectique de dimension infinie. (English summary) [Semigroups generated by the Weil representation of the infinite-dimensional symplectic group] 91d:22018
- Neretin, Yu. A. *see* Nazarov, M. L.; et al., 91d:22018
- Normak, P. PP endomorphism monoids of acts. (Russian and Estonian summaries) 91c:20050
- Nummert, U. Monoids of strong endomorphisms of generalized lexicographic products of graphs. (Russian. English and Estonian summaries) 91c:05184
- O'fshanskii, G. I. *see* Nazarov, M. L.; et al., 91d:22018
- Pastijn, Francis J. Scattered uniform chains. 91j:20145
- Pupov, Yu. F. The endomorphism semigroup of an endomorphic extension of a free semigroup. (Russian) 91j:20135
- Shneperman, L. B. Characterization of the dimension of linear spaces by the additive semigroup of linear relations of rank zero. (Russian) 91k:15006
- Straubing, Howard The wreath product and its applications. 91h:20090
- Wiegandt, Richard On splitting torsion theories of acts. 91k:20080

#### 20M25 Semigroup rings, multiplicative semigroups of rings [see also 16S36, 16Y60]

- Munn, W. D. Semigroup rings of completely regular semigroups. 91j:20159
- On contracted semigroup rings. 91h:20069
- Pozdarskii, I. S. On the semiprimitivity of inverse semigroup algebras and on theorems by Dumanov and Munn. 91f:20072
- Shekhadad, Adel A. Formal complexity of inverse semigroup rings. 91j:20160
- Skornyakov, L. A. Clifford monoids and Boolean-valued groups with a zero. (Russian) 91j:20161

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- Anderson, David F. The Picard group of a monoid domain. II. 91i:13023
- Brown, William C. (with Curtis, Frank) Numerical semigroups of maximal and almost maximal length. 91m:13005
- Curtis, Frank *see* Brown, William C., 91m:13005
- Elliott, George A. (with Ribenboim, Paulo) Fields of generalized power series. 91h:13026
- Gubeladze, Joseph Classical algebraic K-theory of monoid algebras. 91j:19005
- Kelarev, A. V. On the Jacobson radical of semigroup rings of commutative semigroups. 91k:16051
- Semilattices of algebras and a description of the radicals of semigroup algebras. 91m:16019
- Kim, Chol On semiprime semigroup rings. 91j:16034
- Okniński, Jan A note on the PI-property of semigroup algebras. 91f:16037
- (with Putcha, Mohan S.) Complex representations of matrix semigroups. 91e:20047
- Putcha, Mohan S. *see* Okniński, Jan, 91e:20047
- Ribenboim, Paulo Generalized power series rings. (see 91h:00030)
- *see also* Elliott, George A., 91h:13026
- Sokafskii, A. G. Radicals of semigroup rings of orthogroups. 91h:16052

#### 20M30 Representation of semigroups

- Bekbaev, U. D. Some results connected with differential vector spaces. (Russian) 91c:20096
- Okniński, Jan (with Putcha, Mohan S.) Complex representations of matrix semigroups. 91e:20047
- Putcha, Mohan S. *see* Okniński, Jan, 91e:20047

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- Eberhart, Carl (with Williams, W. Wiley) A representation of the free elementary orthodox semigroup. 91d:20070

- Hilgert, Joachim Applications of Lie semigroups in analysis. 91k:22025
- Koubek, V. Finite-to-finite universal varieties of distributive double  $p$ -algebras. 91g:06011
- Moravskiy, Yu. M. The multiplicative group of a field and hyperidentities. 91h:08002
- Puk, Vladimir Representation of semigroups by products of simple graphs. 91c:05185
- Sauer, Norbert W. (with Stone, M. G.) On a problem of B. Jónsson concerning subalgebras and endomorphisms. 91f:08003
- Stone, M. G. *see* Sauer, Norbert W., 91f:08003
- Tołstosheina, S. V. On the semigroup of closure operations. 91a:20074
- Trnková, Věra Nonconstant continuous maps of spaces and of their  $\beta$ -compactifications. 91g:54018
- Products of metric, uniform and topological spaces. 91m:54007
- Williams, W. Wiley *see* Eberhart, Carl, 91d:20070

#### 20M35 Semigroups in automata theory, linguistics, etc. [see also 03D05, 68Qxx, 68S05]

- Chanyshv, A. D. Asymmetric sequences. (Russian) 91k:20077
- Hsu, S. C. (with Ito, Masami<sup>1</sup>; Shih, Hui Jan) Some properties of overlapping order and related languages. 91g:20096
- Ito, Masami<sup>1</sup> *see* Hsu, S. C.; et al., 91g:20096
- Lallement, Gérard J. Programs over finite semigroups: an introduction. (see 91h:00030)
- de Luca, Aldo (with Varricchio, Stefano) Some combinatorial properties of factorial languages. 91f:20073
- Néraud, Jean On the deficit of a finite set of words. 91g:20097
- Pelletier, Marjorie Monoids described by pushdown automata. 91j:20162
- Reis, C. M.  $F$ -disjunctive congruences and a generalization of monoids with length. 91j:20163
- Rhodes, John Survey of global semigroup theory. 91k:20078
- Rupert, C. P. Equidivisible Kleene monoids and the Elgot-Mezzi theorem. 91e:20048
- Shih, Hui Jan *see* Hsu, S. C.; et al., 91g:20096
- Simon, Imre Properties of factorization forests. 91f:20074
- Straubing, Howard The wreath product and its applications. 91h:20090
- Varricchio, Stefano *see* de Luca, Aldo, 91f:20073
- Weil, Pascal An extension of the Schützenberger product. (see 91h:00030)

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- Abdulrah, Habib (with Pécuchet, Jean-Pierre) Solving word equations. 91h:68092
- (with Pécuchet, Jean-Pierre) Solving word equations [MR 91b:68092]. (see 91j:68006)
- Allouche, Jean-Paul (with Betrema, J.; Shallit, Jeffrey) Sur des points fixes de morphismes d'un monoïde libre. (English summary) [On the fixed points of morphisms of a free monoid] 91a:68154
- Ash, C. J. (with Hall, T. E.; Pin, Jean-Eric) On the varieties of languages associated with some varieties of finite monoids with commuting idempotents. 91h:68080
- Bahamonde Rionda, Antonio *see* Gonzalez Rodriguez, Fernando, 91h:68113
- Baker, Kirby A. (with McNulty, George F.; Taylor, Walter) Growth problems for avoidable words. 91f:68109
- Berstel, Jean (with Reutenauer, Christophe) Zeta functions of formal languages. 91f:68110
- Betrema, J. *see* Allouche, Jean-Paul; et al., 91a:68154
- Birget, Jean-Camille (with Margolis, Stuart; Rhodes, John) Semigroups whose idempotents form a subsemigroup. 91k:20067
- Clerbout, Mireille (with Gonzalez, D.) Decomposition of semicommutations. 91j:68067
- Crochemore, Maxime (with Néraud, Jean) Unitary monoid with two generators: an algorithmic point of view. (see 91e:68005)
- Diekert, Volker (with Vogler, Walter) On the synchronization of traces. 91c:68024
- Dô Long Vân (with Thomas, Donald G.; Subramanian, K. G.; Siromoney, Rani) Bi-infinity codes. (French summary) 91k:68108
- Dömölai, Pál (with Ésik, Zoltán) On homomorphic realization and homomorphic simulation of automata by  $\alpha$ -products. 91h:68130
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- Füßler, Zoltán (with Vágvolgyi, Sándor) A complete rewriting system for a monoid of tree transformation classes. 91h:68131
- Gobechia, M. I. A finite sequence of identities of some bi-automata. (Russian. English and Georgian summaries) (Not in MR)
- Gonzalez, D. *see* Clerbout, Mireille, 91j:68067
- Gonzalez Rodriguez, Fernando (with Bahamonde Rionda, Antonio) The topology of continuous partially additive monoids. (French summary) 91h:68113
- Hall, T. E. *see* Ash, C. J.; et al., 91h:68080
- Ito, Masami<sup>1</sup> (with Shih, Hui Jan; Thierrin, Gabriel) Disjunctive languages and compatible orders. (French summary) 91a:68162
- (with Shih, Hui Jan)  $p$ -languages and  $p$ -representations. (German and Russian summaries) 91k:68111
- Kim, Doo-Ho (with Park, Chin-Hong) Algebraic properties associated with input semigroup  $S$  of an automaton. 91g:68120
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- Margolis, Stuart *see* Birget, Jean-Camille; et al., 91k:20067
- McNulty, George F. *see* Baker, Kirby A.; et al., 91f:68109
- Meduna, Alexandr Context free derivations on word monoids. 91h:68088
- Meseguer, José (with Montanari, Ugo) Petri nets are monoids. 91h:68140
- Mignosi, Filippo Infinite words with linear subword complexity. 91h:68093
- Montanari, Ugo *see* Meseguer, José, 91h:68140
- Néraud, Jean *see* Crochemore, Maxime, (91e:68005)
- Nivat, Maurice (with Podelski, Andreas) Tree monoids and recognizability of sets of finite trees. 91k:68141
- Park, Chin-Hong *see* Kim, Doo-Ho, 91g:68120
- Pécuchet, Jean-Pierre *see* Abdulrah, Habib, 91h:68092 and (91j:68006)
- Pin, Jean-Eric *see* Ash, C. J.; et al., 91h:68080
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- Shih, Hui Jan (with Yü, Shih Sheng) Solid codes and disjunctive domains. 91g:68098
- see also Ito, Masami; et al., 91a:68162 and 91k:68111
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- Thomas, Wolfgang Computation tree logic and regular  $\omega$ -languages. 91f:68123
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## 20M50 Connections of semigroups with homological algebra and category theory

- Ahsan, Javed (with Takahashi, Michihiro) Pure spectrum of a monoid with zero. 91b:20091
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- Bulman-Fleming, Sydney (with McDowell, Kenneth) A characterization of left cancellative monoids by flatness properties. 91b:20092
- (with McDowell, Kenneth; Renshaw, J.) Some observations on left absolutely flat monoids. 91k:20079
- Fleischer, Isidore Absolutely flat monoids are amalgamation bases. 91h:20093
- Higgins, Peter M. A short proof of Isbell's zigzag theorem. 91g:20098
- Kaschke, R. A characterization of the principally weakly injectivity of the wreath product of acts. (Russian and Estonian summaries) 91d:20077
- Kilp, M. Wreath products of acts over monoids. IV. Principally weakly flat acts. (Russian and Estonian summaries) 91c:20097
- McDowell, Kenneth see Bulman-Fleming, Sydney, 91b:20092 and 91k:20079
- Normak, P. PP endomorphism monoids of acts. (Russian and Estonian summaries) 91e:20050
- Renshaw, J. see Bulman-Fleming, Sydney; et al., 91k:20079
- Shoji, Kunitaka Amalgamation bases for semigroups. 91m:20090
- Takahashi, Michihiro see Ahsan, Javed, 91b:20091
- Wiegandt, Richard On splitting torsion theories of acts. 91k:20080
- Items with secondary classifications in 20M50
- Berzikh, A. (with Lipyanski, R. S.) Cohomology of finite-dimensional representations of groups and semigroups. (Russian. English summary) 91a:20056
- Bulman-Fleming, Sydney (with McDowell, Kenneth) Monoids over which all weakly flat acts are flat. 91f:20063
- Cohn, P. M. Rank functions on rings. 91i:16002
- Fleischer, V. Isomorphism of wreath products of monoids with categories. (Russian. English and Estonian summaries) 91h:18005
- Gould, Victoria Completely right pure monoids on which  $\mathcal{R}$  is a right congruence. 91a:20072
- Heath, Philip R. Lifting amalgams and other colimits of monoids. 91b:20081
- Hion, Jaak Two-sided wreath products of categories. (Russian. English and Estonian summaries) 91e:18011
- Lawson, Mark V. The geometric theory of inverse semigroups. I.  $E$ -unitary inverse semigroups. 91j:20153
- Lipyanski, R. S. see Berzikh, A., 91a:20056
- McDowell, Kenneth see Bulman-Fleming, Sydney, 91f:20063
- Song, Guang Tian Algebraic  $K$ -theory methods for semigroups. I. The Grothendieck groups of semigroups. (Chinese) 91h:19002

## 20M99 None of the above, but in this section

- Eigensthaler, Günther (with Winkler, Reinhard) Commutative composition semigroups of polynomials. 91i:20054
- Halter-Koch, Franz Arithmetical semigroups defined by congruences. 91m:20091
- Hanumantha Rao, S. see Ramana Murty, P. V., 91b:20090
- Heatherly, Henry Adjoint groups and semigroups of rings. 91i:20055
- Hindman, Neil The semigroup  $\beta\mathbb{N}$  and its applications to number theory. 91m:20092
- Hsiang, W. H. Invertibility and monotonicity on function systems. 91d:20078
- Lyapun, E. S. The possibility of semigroup continuation of a partial groupoid. 91a:20076
- Ramana Murty, P. V. (with Hanumantha Rao, S.) On a semigroup induced by a distributive lattice. 91h:20090
- Renner, Lex E. Algebraic varieties and semigroups. 91j:20164
- Winkler, Reinhard see Eigensthaler, Günther, 91i:20054
- Items with secondary classifications in 20M99
- Behrens, E.-A.  $\star$  Arithmetical completely simple semigroups. 91k:16016

- Bosbach, Bruno Separative Teilbarkeitshalbgruppen. [Separative divisibility semigroups] 91k:06018
- Culik, Karel, II (with Harju, Tero) Dominoes and the regularity of DNA splicing languages. 91h:92016
- Harju, Tero see Culik, Karel, II, 91h:92016
- Hartfiel, D. J. (with Seneta, Eugene) A note on semigroups of regular stochastic matrices. 91m:15031
- Kelarev, A. V. When is the radical of a band sum of rings homogeneous? 91c:16040
- Putcha, Mohan S. The monoid generated by projections in an algebraic group. 91a:20049
- Seneta, Eugene see Hartfiel, D. J., 91m:15031
- Shen, Ji Zhong On fuzzy regular subsemigroups of a semigroup. 91d:20081
- Stepanova, A. A.  $h$ -normality and  $\omega$ -categoricity of Horn classes of some groupoids. (Russian) 91a:03075

## 20Nxx Other generalizations of groups

### Items with secondary classifications in 20Nxx

- Kur'min, E. N. (with Shestakov, I. P.) Nonassociative structures. (Russian) 91k:17001
- Shestakov, I. P. see Kur'min, E. N., 91k:17001

### 20N02 Sets with a single binary operation (groupoids)

- Lyapun, E. S. Partial groupoids that can be obtained from semigroups by restrictions and homomorphisms. 91c:20098
- Volenc, Vladimir Subtractive groupoids and laterally commutative heaps. (Not in MR)
- Items with secondary classifications in 20N02
- Klukovits, Lajos The independence of regular identities in groupoids. 91c:08009
- Zajac, Elzbieta The lattice of varieties of left normal bandoids. 91i:08011

### 20N05 Loops, quasigroups [see also 05Bxx]

- Belousov, V. D. Crossed isotopies of quasigroups. (Russian) 91j:20165
- Belyavskaya, G. B.  $T$ -quasigroups and the center of a quasigroup. (Russian) 91d:20079
- Complete direct decompositions of quasigroups with an idempotent. (Russian) 91j:20166
- Brodiková, Elena On 3-basic quasigroups and their congruences. (Russian and Czech summaries) 91c:20099
- Bulgakov, D. N. A characterization of the class of topological loops that are embedded in an associated group. (Russian. English summary) 91f:20075
- Cheln, Orin (with Goodaire, Edgar G.) Loops whose loop rings in characteristic 2 are alternative. 91g:20099
- (with Goodaire, Edgar G.) Moufang loops with a unique nonidentity commutator (associator, square). 91g:20100
- (with Goodaire, Edgar G.) Code loops are RA2 loops. 91g:20101
- Cheremshkin, A. V. Groups of autotopies of separable strongly dependent operations. (Russian) 91f:20076
- Donovan, Diane Single laws for two subvarieties of squags. 91f:20077
- Glukhov, M. M. On the reducibility of the principal parastrophies of  $n$ -quasigroups. (Russian) 91f:20078
- Goodaire, Edgar G. (with Robinson, D. A.) Some special conjugacy closed loops. 91a:20077
- see also Cheln, Orin, 91g:20099; 91g:20100 and 91g:20101
- Griess, Robert L., Jr. Code loops and a large finite group containing triality for  $D_4$ . 91g:20102
- Guy, Jean-Pierre Sur des groupes isomorphes au groupe de multiplication d'une boucle. (English summary) [Groups isomorphic to the multiplication group of a loop] 91h:20091
- Jachanová, Jaroslava On a generalization of nets. (Russian and Czech summaries) 91h:20094
- Johnson, Kenneth Walter (with Smith, Jonathan D. H.) Characters of finite quasigroups. V. Linear characters. 91a:20078
- (with Smith, Jonathan D. H.; Song, Sung-Yell) Characters of finite quasigroups. VI. Critical examples and doubletons. 91f:20079
- Kalhoff, Franz B. Witt rings of weakly orderable double loops and nearfields. 91h:20095
- Kepka, Tomáš Quasigroups having at most three inner mappings. (Russian and Czech summaries) 91h:20096
- see also Niemenmaa, Markku, 91i:20057
- Kikkawa, Michihiko Projectivity of homogeneous left loops on Lie groups. I. Algebraic framework. 91h:20092
- Larimer, Peter A family of double loops. 91f:20080
- Lyakh, I. V. Normal subnets of algebraic nets. (Russian) 91g:20103
- Homotopies of orthogonal systems of quasigroups. (Russian) 91g:20104
- Monosová, Gabriela Quasigroup identities of canonical form. (Czech. English summary) 91h:20081
- Nímet, Petr Quasigroups linear over commutative Moufang loops. 91i:20056
- Niemenmaa, Markku (with Kepka, Tomáš) On multiplication groups of loops. 91k:20057
- Onof, V. I. (with Ursu, L. A.)  $n$ -ary loops with invertibility properties with one inversion parameter. (Russian) 91e:20051
- Robinson, D. A. see Goodaire, Edgar G., 91a:20077
- Sabinin, L. V. (with Shitneva, L. V.) Reductive spaces and left  $F$ -quasigroups. (Russian. English summary) 91h:20093
- On the infinitesimal theory of smooth hyporeductive loops. (Russian. English summary) (see 91e:3003)
- Saelli, Donato Complete mappings and difference ratio in double loops. (Italian. English summary) 91f:20081
- Shitneva, L. V. see Sabinin, L. V., 91h:20093
- Sharma, Bhagirath Lal see Solarin, A. R. T., 91m:20093
- Smith, Jonathan D. H. Quasigroups, association schemes, and Laplace operators on almost periodic functions. 91h:20097



- Combinatorial characters of quasigroups. 91c:20100
- Entropy, character theory and centrality of finite quasigroups. 91c:20058
- see also Johnson, Kenneth Walter, 91a:20078 and 91f:20079
- Sekhatkii, F. N.  $n$ -ary separable quasigroups with invertibility properties. (Russian) 91k:20082
- Solarin, A. R. T. (with Sharma, Bhagirath Lal) On Bol loops of order 16 with 13 elements of order 2, and with 14 elements of order 4. 91m:20093
- Song, Sung-Yell see Johnson, Kenneth Walter; et al., 91f:20079
- Tararin, V. M. Semi-uniformly ordered loops. (Russian. English summary) (see 91e:53003)
- Testov, V. A. Ordered three-sorted quasigroups. (Russian. English summary) (see 91e:53003)
- Ursu, L. A. see Onoi, V. I., 91e:20051

#### Items with secondary classifications in 20N05

- Belousov, V. D. (with Belyavskaya, G. B.) ★ Латюские квадраты, квазигруппы и их приложения. (Russian) [Latin squares, quasigroups and their applications] 91c:05039
- Belyavskaya, G. B. see Belousov, V. D., 91c:05039
- Billig, V. A. (with Shelekhov, A. M.) Classification of identities of length 12 of order 4 with one variable in a local analytic loop. (Russian. English summary) (see 91e:53003)
- Drápal, Aleš (with Kepka, Tomáš) On a distance of groups and Latin squares. 91c:05040
- Griess, Robert L., Jr. A Moufang loop, the exceptional Jordan algebra, and a cubic form in 27 variables. 91g:17044
- Hartman, A. (with Phelps, Kevin T.) The spectrum of tetrahedral quadruple systems. 91d:05031
- Johnson, Kenneth Walter Latin square determinants. 91h:05026
- (with Leedham-Green, C. R.) Loop cohomology. 91k:18003
- Kepka, Tomáš see Drápal, Aleš, 91c:05040
- Leedham-Green, C. R. see Johnson, Kenneth Walter, 91k:18003
- Mikhchev, P. O. Loops with a left pseudospecial property. (Russian. English summary) 91f:53014
- Movslayan, Yu. M. The multiplicative group of a field and hyperidentities. 91h:08002
- Phelps, Kevin T. see Hartman, A., 91d:05031
- Sabinin, L. V. Differential equations of smooth loops. (Russian) 91h:53002
- Differential geometry and quasigroups. (Russian) 91f:53015
- Shabunin, L. V. Decidability of the elementary theory of a finitely presented quasigroup. 91g:03021
- Shelekhov, A. M. Classification of multidimensional three-webs according to closure conditions. (Russian) 91h:53018
- Autotopies of three-webs and geometric  $G$ -webs. 91f:53034
- see also Billig, V. A., (91e:53003) and Webs and quasigroups, 91e:53003
- Teitlinck, Lac Generalized idempotent orthogonal arrays. 91d:05027
- Walther, Frank Quasigruppen und Kantenfärbungen vollständiger Graphen. [Quasigroups and edge colorings of complete graphs] 91a:05045

#### Items listed otherwise than by author

- Webs and quasigroups ★ Ткани и квазигруппы. (Russian) [Webs and quasigroups] 91e:53003

### 20N10 Ternary systems (heaps, semiheaps, heapoids, etc.)

- Santiago, M. L. Regular ternary semigroups. 91m:20094
- Ušan, Janex  $A_1$ -3-groupoids. (Russian. Serbo-Croatian summary) 91c:20101

#### Items with secondary classifications in 20N10

- Bhattacharya, Prabir see Mesner, Dale M., 91j:05103
- Brodskii, G. M. (with Cheburakhina, O. N.) Remarks on parallelogram spaces and groups with a "forgotten" unit. (Russian) 91h:51003
- Cheburakhina, O. N. see Brodskii, G. M., 91h:51003
- Dinykh, A. P. Projective planes with a group of collineations that is transitive on points lying outside the sides of a triangle. (Russian) 91d:51001
- Kalheff, Franz B. Uniform valuations on planar ternary rings. 91a:51001a
- Errata: "Uniform valuations on planar ternary rings". 91a:51001b
- Kepka, Tomáš On some classes of ternary rings. 91g:20108
- Mesner, Dale M. (with Bhattacharya, Prabir) Association schemes on triples and a ternary algebra. 91j:05103
- Volesev, Vladimir Subtractive groupoids and laterally commutative heaps. (Not in MR)

### 20N15 $n$ -ary systems

- Armanious, M. H. Existence of nilpotent SQS-skeins of class  $n$ . 91d:20080
- Belyavskaya, G. B. (with Syrbu, P. N.) A class of self-orthogonal  $n$ -groupoids. (Russian) 91g:20105
- Both, N. see Purdea, I., 91j:20169
- Celakoski, N. (with Markovski, S.; Janeva, B.) Some classes of vector valued associates. (Macedonian summary) (see 91h:20002)
- see also Čupona, G.; et al., (91h:20002)
- Chronowski, Antoni The Peirce equation on  $n$ -semigroups and  $n$ -groups. 91g:20106
- Čupona, G. (with Markovski, S.) Vector valued subgroupoids of semigroups. (Macedonian summary) (Not in MR)
- (with Dimovski, Dončo; Samardžiski, A.) Fully commutative vector valued groups. (Macedonian summary) (Not in MR)
- (with Celakoski, N.; Markovski, S.; Dimovski, Dončo) Vector valued groupoids, semigroups and groups. (Macedonian summary) (see 91h:20002)
- (with Markovski, S.; Dimovski, Dončo; Janeva, B.) Introduction to combinatorial theory of vector valued semigroups. (Macedonian summary) (see 91h:20002)
- Dimovski, Dončo Examples of vector valued groups. (Macedonian summary) (Not in MR)
- (with Ilić, Snežana) Commutative  $(2m, m)$ -groups. (Macedonian summary) (see 91h:20002)
- Free  $(n+1, n)$ -groups. (Macedonian summary) (see 91h:20002)
- see also Čupona, G.; et al., (Not in MR); (91h:20002) and (91h:20002)

- Dudek, V. A.  $m$ -semi-abelian  $n$ -ary groups. (Russian) 91k:20083
- $n$ -ary Cauchy kernels. (Russian) 91m:20095
- Dudek, Wiesław A. On  $n$ -ary group with only one skew element. (Serbo-Croatian summary) 91c:20052
- Gafmak, A. M. Normal subgroups of  $n$ -ary groups and their generalizations. (Russian) 91j:20167
- Glazek, Kazimierz (with Michalski, Jacek) Polyadic group operations on small sets. 91g:20107
- Ilić, Snežana see Dimovski, Dončo, (91h:20002)
- Janeva, B. see Celakoski, N.; et al., (91h:20002) and Čupona, G.; et al., (91h:20002)
- Kepka, Tomáš On some classes of ternary rings. 91g:20108
- Markovski, S. see Čupona, G., (Not in MR); (91h:20002); Celakoski, N.; et al., (91h:20002) and Čupona, G.; et al., (91h:20002)
- Michalski, Jacek On some classes of abelian polyadic groups. 91j:20168
- see also Glazek, Kazimierz, 91g:20107
- Polonjo, Mirko Transitive  $n$ -quasigroups. 91g:20109
- Purdea, I. (with Both, N.) Isomorphisms of power  $n$ -semigroups. 91j:20169
- Samardžiski, A. see Čupona, G.; et al., (Not in MR)
- Stojaković, Zoran Vector valued quasigroups. (Macedonian summary) (see 91h:20002)
- On some classes of permutable  $n$ -groupoids and  $n$ -quasigroups. (Serbo-Croatian summary) 91a:20079
- Syrbu, P. N. Self-orthogonal  $n$ -groups. (Russian) 91e:20053
- see also Belyavskaya, G. B., 91g:20105
- Ursu, L. A.  $n$ -ary loops with the invertibility property. (Russian) 91h:20094

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- Cheremushkin, A. V. Groups of autotopies of separable strongly dependent operations. (Russian) 91f:20076
- Čupona, G. (with Markovski, S.) Cohn-Rebane theorem for vector valued algebras. (Macedonian summary) (Not in MR)
- Glukhov, M. M. On the reducibility of the principal parastrophies of  $n$ -quasigroups. (Russian) 91f:20078
- Markovski, S. see Čupona, G., (Not in MR)
- Onoi, V. I. (with Ursu, L. A.)  $n$ -ary loops with invertibility properties with one inversion parameter. (Russian) 91e:20051
- Ursu, L. A. see Onoi, V. I., 91e:20051

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- Vector valued semigroups and groups ★ Vector valued semigroups and groups. 91h:20002

### 20N20 Hypergroups

- De Maria, Francesco Hypergroups  $(Z_n, q)$ . (Italian. English summary) 91h:20095
- Freni, Domenico On canonical hypergroups and congruences. (Italian. English summary) 91g:20110
- Haddad, Lahib (with Sureau, Yves) Les cogroupes et la construction de Utumi. (English summary) [Cogroups and the Utumi construction] 91j:20170
- Massouros, Ch. G. Hypergroups and convexity. 91h:20096
- Migliorato, Renato On 1-hypergroups. (Italian. English summary) 91h:20097
- Roth, Richard L. On derived canonical hypergroups. 91g:20111
- Sureau, Yves see Haddad, Lahib, 91j:20170
- Vouglouklis, Thomas Representations of hypergroups by hypermatrices. 91g:20112

#### Items with secondary classifications in 20N20

- Konstantinidou, Maria see Serafimidis, Karolos; et al., 91g:06019
- Mittas, Jean see Serafimidis, Karolos; et al., 91g:06019
- Serafimidis, Karolos (with Konstantinidou, Maria; Mittas, Jean) Sur les hypergroupes canoniques strictement réticulés. [On strictly lattice-ordered canonical hypergroups] 91g:06019

#### Sender, V. S. Hypergroups and subfactors. 91m:46096

### 20N25 Fuzzy groups [see also 04A72]

- Ajmal, Naseem see Dixit, V. N.; et al., 91h:20098
- Dixit, V. N. (with Kumar, Rajesh; Ajmal, Naseem) Level subgroups and union of fuzzy subgroups. 91h:20098
- Filep, László (with Maurer, Iulius Gyula) Fuzzy groups and groups of fuzzy elements. (Not in MR)
- Gu, Wen Xiang  $R$ -fuzzy groups,  $T$ -fuzzy groups and pointwise fuzzy groups. (Chinese) (Not in MR)
- Kumar, Rajesh see Dixit, V. N.; et al., 91h:20098
- Mashinch, Mashallah (with Zahedi, M. M.) A counterexample of P. S. Das's paper: "Fuzzy groups and level subgroups" [J. Math. Anal. Appl. 84 (1981), no. 1, 264–269; MR 83a:20052]. 91j:20171
- Maurer, Iulius Gyula see Filep, László, (Not in MR)
- Shen, Ji Zhong On fuzzy regular subsemigroups of a semigroup. 91d:20081
- (Sivaramakrishna Das, P.) see Mashinch, Mashallah, 91j:20171
- Zahedi, M. M. see Mashinch, Mashallah, 91j:20171

#### Items with secondary classifications in 20N25

- Dumitrescu, Constantin Dual structures in the fuzzy sets theory and in the groups theory. (see 90m:41003)
- Filep, László (with Maurer, Iulius Gyula) Compatible fuzzy relations and groups. 91j:04006
- Gu, Wen Xiang Relations among groups  $GL_n(I)$ ,  $G_n$  and  $S_n$ . (Not in MR)
- Kuroki, Nobuaki On fuzzy semigroups. 91j:20144
- Maurer, Iulius Gyula see Filep, László, 91j:04006

### 20N99 None of the above, but in this section

- Ibrahim, A. Shawky (with Khatib, S. A.) On fuzzy quotient subgroups. 91c:20102

- Khatib, S. A. *see* Ibrahim, A. Shawky, 91c:20102  
 Miltz, Rainer (with Veldsman, Stefan) Radicals and subdirect decompositions of  $\Omega$ -groups. 91g:20113  
 Veldsman, Stefan *see* Miltz, Rainer, 91g:20113  
 Zhang, Chun Cheng The quotient structure of a multiple group. (Chinese. English summary) 91k:20004

#### Items with secondary classifications in 20N99

- Hofer, Gerhard Left ideals and reachability in machines. 91c:68096  
 Jezek, Jaroslav (with Kepka, Tomáš) Varieties of groupoids determined by short linear identities. 91b:08006  
 Kepka, Tomáš *see* Jezek, Jaroslav, 91b:08006  
 Lyapin, E. S. The possibility of semigroup continuation of a partial groupoid. 91a:20076  
 Spartalis, Stefanos A class of hyperrings. 91h:16076  
 Stepanova, A. A.  $h$ -normality and  $\omega$ -categoricity of Horn classes of some groupoids. (Russian) 91a:03075  
 Vougiouklis, Thomas On rings with zero divisors. Strong  $V$ -groups. 91k:16020

### 20P05 Probabilistic methods in group theory

#### Items with secondary classifications in 20P05

- Babai, László The probability of generating the symmetric group. 91a:20007  
 Erdős, Paul (with Szalay, M.) On some problems of the statistical theory of partitions. 91g:11113  
 Kantor, William M. (with Lubotzky, Alexander) The probability of generating a finite classical group. 91j:20041  
 Lubotzky, Alexander *see* Kantor, William M., 91j:20041  
 Szalay, M. *see* Erdős, Paul, 91g:11113

## 22-XX Topological groups, Lie groups (For transformation groups, see 54H15, 57Sxx, 58-XX. For abstract harmonic analysis, see 43-XX.)

### 22-00 General reference works (handbooks, dictionaries, bibliographies, etc.)

#### Items with secondary classifications in 22-00

- (Barut, Asim O.) *see* Bibliography: Indecomposable representations, (91b:22002)

#### Items listed otherwise than by author

- Bibliography:**  
 Indecomposable representations Bibliography: Indecomposable representations. (see 91b:22002)

### 22-01 Instructional exposition (textbooks, tutorial papers, etc.)

- (Leites, D. A.) *see* Onishchik, A. L., 91g:22001  
 Onishchik, A. L. (with Vinberg, E. B.)  $\star$  Lie groups and algebraic groups. 91g:22001  
 Vinberg, E. B. *see* Onishchik, A. L., 91g:22001

#### Items with secondary classifications in 22-01

- Varadarajan, V. S.  $\star$  An introduction to harmonic analysis on semisimple Lie groups. 91m:22018

### 22-02 Research exposition (monographs, survey articles)

- Bott, Raoul H. On induced representations. 91k:22001  
 (Busyatetskaya, I. K.) *see* Bott, Raoul H., 91k:22001  
 Dikranjan, Dikran N. (with Prodanov, Ivan R.; Stoyanov, Luchezar N.)  $\star$  Topological groups. 91e:22001  
 Prodanov, Ivan R. *see* Dikranjan, Dikran N.; et al., 91e:22001  
 Stoyanov, Luchezar N. *see* Dikranjan, Dikran N.; et al., 91e:22001

#### Items with secondary classifications in 22-02

- du Cloux, Fokko Finite-length representations of nilpotent Lie groups. 91h:22015  
 Pascual Gaiña, Pere Cohomology of Lie groups made discrete. 91g:19004  
 Pym, John S. Compact semigroups with one-sided continuity. 91k:22010  
 Rogawski, Jonathan D.  $\star$  Automorphic representations of unitary groups in three variables. 91k:22037  
 Sugita, Mitsuo  $\star$  Unitary representations and harmonic analysis. 91c:22028

#### Items listed otherwise than by author

- Annals of Mathematics Studies *see* Rogawski, Jonathan D., 91k:22037

### 22-03 Historical (must also be assigned at least one classification number from Section 01)

#### Items with secondary classifications in 22-03

- Bott, Raoul H. On induced representations. 91k:22001  
 (Busyatetskaya, I. K.) *see* Bott, Raoul H., 91k:22001  
 Dulstermaat, Hans Peculiarities in the development of the theory of Lie groups. 91g:01028  
 Helgason, Sigurdur A centennial: Wilhelm Killing and the exceptional groups. 91k:01006  
 (Killing, Wilhelm) *see* Helgason, Sigurdur, 91k:01006  
 (Klein, Felix) *see* Perović, Miodrag, 91j:01027  
 Perović, Miodrag Felix Klein's Erlangen program and its influence on the development of mathematics. (Serbo-Croatian) 91j:01027  
 Pier, Jean-Paul  $\star$  L'analyse harmonique. (French) [Harmonic analysis] 91f:43001

### 22-06 Proceedings, conferences, collections, etc.

- (Cantoni, Vittorio) *see* Symposia Mathematica, 91b:22002  
 (Duflo, Michel) *see* Orbit method in representation theory, 91i:22001  
 (Gamskrelidze, R. V.) *see* Current problems in mathematics. Fundamental directions, 91h:22001  
 (Gelfand, S. I.) *see* Topics in representation theory, 91m:22002  
 (Hofmann, Karl Heinrich) *see* Analytical and topological theory of semigroups, 91e:22002  
 (Kirillov, A. A.) *see* Topics in representation theory, 91m:22002  
 (Lawson, Jimmie D.) *see* Analytical and topological theory of semigroups, 91e:22002  
 (Pantoja, José E.) *see* Workshop: Group Representations, 91e:22003  
 (Podersén, N. V.) *see* Orbit method in representation theory, 91i:22001  
 (Pym, John S.) *see* Analytical and topological theory of semigroups, 91e:22002  
 (Sosinski, A. B.) *see* Topics in representation theory, 91m:22002  
 (Soto-Andrade, Jorge) *see* Workshop: Group Representations, 91e:22003  
 (Vakhrameev, S. A.) *see* Noncommutative harmonic analysis, 91k:22002  
 (Vergne, Michèle) *see* Orbit method in representation theory, 91i:22001  
 (Vershik, A. M.) *see* Representation of Lie groups and related topics, 91m:22001  
 (Zhelobenko, D. P.) *see* Representation of Lie groups and related topics, 91m:22001

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- Analytical and topological theory of semigroups  $\star$  The analytical and topological theory of semigroups. 91e:22002

#### Conference:

- Indecomposable Representations of Lie Groups and their Physical Applications  
 $\star$  Symposia Mathematica. Vol. XXXI. 91b:22002  
 Orbit Method in Representation Theory  $\star$  The orbit method in representation theory. 91i:22001

#### Copenhagen $\star$ The orbit method in representation theory. 91i:22001

- Current problems in mathematics. Fundamental directions  $\star$  Современные проблемы математики. Фундаментальные направления. Том 41. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 41] 91h:22001

- Izvestiya Akademii Nauk SSSR Matematika  $\star$  Современные проблемы математики. Фундаментальные направления. Том 41. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 41] 91h:22001

- $\star$  Некоммутативный гармонический анализ. 2. (Russian) [Noncommutative harmonic analysis. 2] 91k:22002

- Noncommutative harmonic analysis  $\star$  Некоммутативный гармонический анализ. 2. (Russian) [Noncommutative harmonic analysis. 2] 91k:22002

- Orbit method in representation theory  $\star$  The orbit method in representation theory. 91i:22001

- Progress in Mathematics  $\star$  The orbit method in representation theory. 91i:22001

- Representation of Lie groups and related topics  $\star$  Representation of Lie groups and related topics. 91m:22001

- Rome  $\star$  Symposia Mathematica. Vol. XXXI. 91b:22002

- Santiago  $\star$  Workshop on Group Representations. Part II. 91e:22003

- Symposia Mathematica  $\star$  Symposia Mathematica. Vol. XXXI. 91b:22002

- Topics in representation theory  $\star$  Topics in representation theory. 91m:22002

#### Workshop:

- Group Representations  $\star$  Workshop on Group Representations. Part II. 91e:22003

#### Items with secondary classifications in 22-06

- (Connes, Alain) *see* Operator algebras, unitary representations, enveloping algebras, and invariant theory, 91m:00036  
 (Dixmier, Jacques) *see* Operator algebras, unitary representations, enveloping algebras, and invariant theory, 91m:00036  
 (Duflo, Michel) *see* Operator algebras, unitary representations, enveloping algebras, and invariant theory, 91m:00036  
 (Joseph, Anthony) *see* Operator algebras, unitary representations, enveloping algebras, and invariant theory, 91m:00036  
 (Rentschler, Rudolf) *see* Operator algebras, unitary representations, enveloping algebras, and invariant theory, 91m:00036

#### Items listed otherwise than by author

##### Birthdays:

- Dixmier, Jacques  $\star$  Operator algebras, unitary representations, enveloping algebras, and invariant theory. 91m:00036

##### Colloquium:

- Operator Algebras, Unitary Representations, Enveloping Algebras, and Invariant Theory  
 $\star$  Operator algebras, unitary representations, enveloping algebras, and invariant theory. 91m:00036

- Operator algebras, unitary representations, enveloping algebras, and invariant theory  
 $\star$  Operator algebras, unitary representations, enveloping algebras, and invariant theory. 91m:00036

- Paris  $\star$  Operator algebras, unitary representations, enveloping algebras, and invariant theory. 91m:00036

- Progress in Mathematics  $\star$  Operator algebras, unitary representations, enveloping algebras, and invariant theory. 91m:00036

Research on coadjoint orbits in representation theory ★ Hyogenron ni okeru kyōyaku zuihankō no kenkyū. (Japanese) [Research on coadjoint orbits in representation theory] 91c:46005

#### Symposium:

Research on Coadjoint Orbits in Representation Theory ★ Hyogenron ni okeru kyōyaku zuihankō no kenkyū. (Japanese) [Research on coadjoint orbits in representation theory] 91c:46005

## 22Axx Topological and differentiable algebraic systems {For topological rings and fields, see 12Jxx, 13Jxx, 16W80; for dual spaces of operator algebras and topological groups, see 47D35.}

### 22A05 Structure of general topological groups

- Arnaudov, V. I. (with Kabanova, E. I.) Strengthening the group topology of a countable group up to a general group. 91d:22001
- Charyev, A. see Protasov, I. V., 91f:22002
- Clark, Bradd (with Schneider, Victor P.) On constructing the associated Graev topology. 91m:22003
- Dikranjan, Dikran N. (with Shakhmatov, D. B.) Products of minimal abelian groups. 91i:22002
- van den Dries, L. P. D. Weil's group chunk theorem: a topological setting. 91k:22003
- Durkin, Ana Lia Existence of coproducts in the category of compact topological groups. (Spanish. English summary) 91c:22001
- Friz, Roman Some results in sequential convergence groups. (see 91h:46004)
- Hart, Klaas Pieter (with van Mill, Jan) Countably compact groups with non-countably-compact products. 91h:22001
- Islamov, A. N. Completion of topological  $l$ -groups with 0-convex topology by means of Cauchy filters. (Russian) (see 91j:00010)
- Kabanova, E. I. see Arnaudov, V. I., 91d:22001
- Katz, Elyahu (with Morris, Sidney A.) Free abelian topological groups on countable CW-complexes. 91h:22002
- Kirk, P. I. A criterion for the connected topologizability of periodic abelian groups of finite period. (Russian) 91m:22004
- Koutnik, Václav On completion of abelian  $\mathcal{S}_0^*$ -groups. 91k:22003
- Kramarov, B. A. A condition for the compactness of the quotient space of a topological group. (Russian) 91f:22001
- Ludwig, Klaus Zum Begriff des Zusammenhanges in der topologischen Gruppe  $\mathcal{O}_{H(G)}^D$  von Lie-Reihen. [On the notion of connection in the topological group  $\mathcal{O}_{H(G)}^D$  of Lie series] 91a:22001
- van Mill, Jan see Hart, Klaas Pieter, 91h:22001
- Morris, Sidney A. see Katz, Elyahu, 91h:22002
- Okunev, O. G. A method for constructing examples of  $M$ -equivalent spaces. 91k:22004
- Protasov, I. V. (with Charyev, A.) Bourbaki spaces of topological groups. 91f:22002
- Remus, Dieter A short solution of Markov's problem on connected group topologies. 91c:22002
- Rusakov, S. A. Two definitions of a topological  $n$ -ary group. (Russian) 91k:22005
- Schlichting, Günther Some applications of topology to group theory. 91g:22002
- Schneider, Victor P. see Clark, Bradd, 91m:22003
- Shakhmatov, D. B. Minimal topologizations of free groups. (Russian) (see 91k:00013)
- see also Dikranjan, Dikran N., 91f:22002
- Sipacheva, O. V. (with Tkachenko, M. G.) Thin and bounded subsets of free topological groups. 91k:22006
- Svetlichnyi, S. A. Intersection of topologies and metrizable in topological groups. 91h:22003
- Tkachenko, M. G. see Sipacheva, O. V., 91k:22006
- Ursul, M. I. The Hartman-Mycielski theorem. (Russian) 91k:22007
- Uspenskii, V. V. On the group of isometries of the Urysohn universal metric space. 91f:22003
- Wu, Ta Sun On the structure of certain locally compact topological groups. 91h:22004
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## 22D40 Ergodic theory on groups [see also 28Dxx, 43A60]

- Adams, Scott (with Spatzier, R. J.) Kazhdan groups, cocycles and trees. 91c:22011  
 Dokken, Douglas Paul (with Ellis, Robert Mortimer) The Poisson flow associated with a measure. 91d:22005  
 Ellis, Robert Mortimer. *see* Dokken, Douglas Paul, 91d:22005  
 Gulwac'h, Yves (with Raugi, Albert) Propriétés de contraction d'un semi-groupe de matrices inversibles. Coefficients de Liapunoff d'un produit de matrices aléatoires indépendantes. (English summary) [Contraction properties of an invertible matrix

- semigroup. Lyapunov coefficients of a product of independent random matrices] 91b:22006
- Iozzi, Alessandra Algebraic hulls and smooth orbit equivalence. 91j:22003
- Isomajlov, R. S. The spectrum of dynamical systems and the Riesz products. 91b:22011
- Kitchens, Bruce (with Schmidt, Klaus D.) Automorphisms of compact groups. 91g:22008
- Ratner, Marina Invariant measures for unipotent translations on homogeneous spaces. 91e:22009
- Raugi, Albert see Guivarc'h, Yves, 91b:22006
- Schmidt, Klaus D. see Kitchens, Bruce, 91g:22008
- Spatzier, R. J. see Adams, Scott, 91c:22011
- Starkov, A. N. Constructions of orbits of flows on some homogeneous spaces. (Russian) 91f:22009
- Ergodic decomposition of flows on homogeneous spaces of finite volume. 91f:22010

## Items with secondary classifications in 22D40

- Adams, Scott Trees and amenable equivalence relations. 91d:28041
- Berzglyt, S. I. (with Golodets, V. Ya.) Type III<sub>λ</sub> transformations of measure space and outer conjugacy of countable amenable groups of automorphisms. 91c:46091
- Cowling, Michael (with Zimmer, Robert J.) Actions of lattices in  $Sp(1, n)$ . 91b:22015
- Dayeama, Masahito The almost weak specification property for ergodic group automorphisms of abelian groups. 91b:28014
- Dokken, Douglas Paul  $\mu$ -harmonic functions on locally compact groups. 91k:43001
- Dumas, Jean-Louis (with Senetaur, Henri) Characterization of the type of some generalizations of the Cauchy distribution. 91a:60026
- Feldman, Jacob (with Sutherland, C. E.; Zimmer, Robert J.) Subrelations of ergodic equivalence relations. 91c:28020
- Geller, S. L. (with Golodets, V. Ya.) Fundamental groups for ergodic actions and actions with unit fundamental groups. 91c:46090
- Golodets, V. Ya. (with Sokhet, A. M.) Ergodic actions of abelian groups with a discrete spectrum, and approximate transitivity. 91b:28015
- see also Berzglyt, S. I., 91c:46091 and Geller, S. L., 91c:46090
- Harrington, L. A. (with Kechris, A. S.; Louveau, Alain) A Glimm-Effros dichotomy for Borel equivalence relations. 91b:28023
- Hawkins, Jane M. Properties of ergodic flows associated to product odometers. 91c:46081
- Jørgensen, Palle E. T. Noncommutative differential geometry, quantization, and smooth symmetries of the  $C^*$ -algebras associated to topological dynamics. 91c:46092
- Kechris, A. S. see Harrington, L. A.; et al., 91b:28023
- Lashof, Richard K. (with Zimmer, Robert J.) Manifolds with infinitely many actions of an arithmetic group. 91h:22025
- Louveau, Alain see Harrington, L. A.; et al., 91b:28023
- Nicholls, Peter J. ★ The ergodic theory of discrete groups. 91i:58104
- Packer, Judith A. Twisted group  $C^*$ -algebras corresponding to nilpotent discrete groups. 91c:46091
- Peligrad, C. Duality type results and ergodic actions of simple Lie groups on operator algebras. 91k:46077
- Reyes, Edgar N. On representations of semi-direct product groups. 91c:22009
- Rouhani, H. A Furstenberg transformation of the 2-torus without quasi-discrete spectrum. 91m:46108
- Rudolph, Daniel J. Markov tilings of  $\mathbb{R}^n$  and representations of  $\mathbb{R}^n$  actions. 91b:28016
- Senetaur, Henri see Dumas, Jean-Louis, 91a:60026
- Shortt, Rae Michael Groups of measurable automorphisms for spaces of finite type. 91c:28015
- Sokhet, A. M. see Golodets, V. Ya., 91b:28015
- Starkov, A. N. The structure of orbits of homogeneous flows and the Raghunathan conjecture. 91f:22017
- Sutherland, C. E. see Feldman, Jacob; et al., 91c:28020
- Thomsen, Klaus Ergodic actions of group extensions on von Neumann algebras. 91d:46086
- Zimmer, Robert J. see Cowling, Michael, 91b:22015; Feldman, Jacob; et al., 91c:28020 and Lashof, Richard K., 91h:22025

## 22D45 Automorphism groups of locally compact groups

## Items with secondary classifications in 22D45

- Schlichting, Günther Some applications of topology to group theory. 91g:22002
- Thomsen, Klaus Ergodic actions of group extensions on von Neumann algebras. 91d:46086

## 22D99 None of the above, but in this section

- Lushchitskaya, I. G. Geometry of limit Lie groups. (Russian) (see 91j:00010)
- Yamaleev, R. M. ★ Введение в  $N$ -унитарную группу преобразований. (Russian) [Introduction to an  $N$ -unitary transformation group] 91g:22009
- Items with secondary classifications in 22D99
- Bożejko, Marek Positive-definite kernels, length functions on groups and a noncommutative von Neumann inequality. 91f:43011
- Cartwright, Donald I. On the asymptotic behaviour of convolution powers of probabilities on discrete groups. 91a:60024
- Johnson, David Lee Continuity of multipliers on  $D(G)$ . 91d:43010

## 22Exx Lie groups {For the topology of Lie groups and homogeneous spaces, see 57Sxx, 57Txx; for analysis thereon, see 43A80, 43A85, 43A90.}

## Items with secondary classifications in 22Exx

- Ehrenpreis, Leon Fourier analysis, partial differential equations, and automorphic functions. 91k:11036

- (Garkrelidze, R. V.) see Current problems in mathematics. Fundamental directions, 91b:22001
- (Vershik, A. M.) see Representation of Lie groups and related topics, 91m:22001
- (Zhelobenko, D. P.) see Representation of Lie groups and related topics, 91m:22001

## Items listed otherwise than by author

- Current problems in mathematics. Fundamental directions ★ Современные проблемы математики. Фундаментальные направления. Том 41. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 41] 91b:22001
- Itogi Nauki i Tekhniki ★ Современные проблемы математики. Фундаментальные направления. Том 41. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 41] 91b:22001
- Representation of Lie groups and related topics ★ Representation of Lie groups and related topics. 91m:22001

## 22E05 Local Lie groups [see also 34-XX, 35-XX, 58H05]

- Marenich, A. S. Solution of Lagrange and Bührmann-Lagrange equations of a countable set of variables. (Russian) 91c:22010
- Lagrange series of a countable number of variables. (Russian) 91c:22011
- Items with secondary classifications in 22E05
- Berg, Lethar The structure of the solutions of nonlinear partial differential equations from the theory of Lie series. 91h:35016
- Overdetermined systems of nonlinear partial differential equations. (German and Russian summaries) 91h:35017
- Bluman, George W. (with Kumei, Sukeyuki) ★ Symmetries and differential equations. 91b:58284
- Carroll, Robert Wayne On the ubiquitous Gelfand-Levitan-Marčenko (GLM) equation. 91c:34035
- Chen, Xing Zhen see Yang, Qing Jian; et al., 91a:35090
- Dazord, Pierre Groupoides symplectiques et troisième théorème de Lie "non linéaire". [Symplectic groupoids and Lie's "nonlinear" third theorem] 91i:58169
- Flach, G. (with Kirschbaum, D.) On the Lie group of projective canonical transformations. (German summary) 91b:58063
- Fushchich, V. I. (with Shiten'ko, V. M.; Serov, N. I.) ★ Симметричный анализ в точные решения нелинейных уравнений математической физики. (Russian) [Symmetry analysis and exact solutions of nonlinear equations of mathematical physics] 91e:58213
- Grosso, Roberto (with Stephani, Hans) Bianchi types of Lie point symmetries arising for differential rotating stationary axisymmetric fluids. 91d:83053
- Hofmann, Karl Heinrich (with Lawson, Jimmie D.) Local semigroups in Lie groups and locally reachable sets. 91i:93013
- Ibragimov, N. Kh. ABC of group analysis. (Russian) 91h:35020
- Jahan, Ishtat Representation theory of the Lie group  $T_3$  and Bessel polynomials. 91d:33012
- Kamefuchi, S. see Omote, M.; et al., 91c:81041
- Kirschbaum, D. see Flach, G., 91b:58063
- Kumei, Sukeyuki see Bluman, George W., 91b:58284
- Lawson, Jimmie D. Embedding local semigroups into groups. 91c:22004
- see also Hofmann, Karl Heinrich, 91i:93013
- Lee, Hong-Gi see Suh, Sungwoo, 91i:93028
- Molina, R. (with Viguera Campuzano, A.) Lie series and first integrals of the problem of a gyrost with a fixed point in a central Newtonian field with potential  $V^{(2)}$ . (Spanish. English summary) 91b:70013
- Ohnuki, Yoshio see Omote, M.; et al., 91c:81041
- Omote, M. (with Kamefuchi, S.; Takahashi, Yasushi; Ohnuki, Yoshio) Galilean covariance and the Schrödinger equation. 91c:81041
- Pan, Zu Liang see Yang, Qing Jian; et al., 91a:35090
- Rakhula, M. O. On the geometry of differential equations. (Russian. English summary) 91b:58005
- Serov, N. I. see Fushchich, V. I.; et al., 91e:58213
- Shiten'ko, V. M. see Fushchich, V. I.; et al., 91e:58213
- Stephani, Hans see Grosso, Roberto, 91d:83053
- Suh, Sungwoo (with Lee, Hong-Gi) Sampling effect on the exponential map of vector fields. 91i:93028
- Takahashi, Yasushi see Omote, M.; et al., 91c:81041
- Viguera Campuzano, A. see Molina, R., 91b:70013
- Yang, Qing Jian (with Chen, Xing Zhen; Zheng, Ke Jie; Pan, Zu Liang) Similarity solutions to three-dimensional nonlinear diffusion equations. 91a:35090
- Zheng, Ke Jie see Yang, Qing Jian; et al., 91a:35090

## 22E10 General properties and structure of complex Lie groups [see also 32M05]

- Dörr, Norbert On Ol'shanskii's semigroup. 91k:22018
- Goto, Merikuni Maximal tori and the center in an analytic group. 91d:22006
- Lichnerowicz, André Groupes de Lie à structures symplectiques ou kähleriennes invariantes. [Lie groups with symplectic or invariant Kähler structures] 91k:22019
- La, Jiang-Hua (with Weinstein, Alan D.) Poisson Lie groups, dressing transformations, and Bruhat decompositions. 91c:22012
- Weinstein, Alan D. see La, Jiang-Hua, 91c:22012

## Items with secondary classifications in 22E10

- Borovik, A. V. (with Poizat, Bruno) Tori et  $p$ -groupes. [Tori and  $p$ -groups] 91j:03045
- Gorbatskii, V. V. see Vinberg, E. B.; et al., 91j:17004
- Klimenko, E. Ya. A class of the 2-generator subgroups of  $PSL(2, C)$ . 91a:20053
- (Leites, D. A.) see Onishchik, A. L., 91j:22001
- Onishchik, A. L. (with Vinberg, E. B.) ★ Lie groups and algebraic groups. 91g:22001
- see also Vinberg, E. B.; et al., 91j:17004
- Panasjuk, S. P. Normality in the space of subgroups of a Lie group. 91k:22022
- Poizat, Bruno see Borovik, A. V., 91j:03045



- Pullen, David  $SU_2(2, F[x, 1/z])$  for  $F$  a subfield of  $\mathbb{C}$ . 91a:20033  
 du Santoy, Marcus P. F. Polycyclic groups and topological groups. 91j:20092  
 Tanguchi, Yoshiharu On the rigidity and homogeneity for Kähler submanifolds of complex space forms. 91e:53065  
 Vinberg, E. B. (with Gorbatshev, V. V.; Onishchik, A. L.) Structure of Lie groups and Lie algebras. (Russian) 91j:17004  
 — see also Onishchik, A. L., 91g:22001

## 22E15 General properties and structure of real Lie groups

- Andrica, Dorin (with Mare, Liviu) The image of exponential mapping on the linear group  $GL(n, \mathbb{R})$ . 91h:22007  
 Chourbanov, Yu. D. Induced almost complex connections on  $\Phi$ -spaces and their subspaces. (Russian) 91k:22010  
 Hilgert, Joachim (with Hofmann, Karl Heinrich; Lawson, Jimmie D.) ★ Lie groups, convex cones, and semigroups. 91k:22020  
 Hofmann, Karl Heinrich see Hilgert, Joachim; et al., 91k:22020  
 Kabenyuk, M. I. Compact elements and Cartan subgroups of connected Lie groups. 91e:22013  
 Lawson, Jimmie D. see Hilgert, Joachim; et al., 91k:22020  
 Mare, Liviu see Andrica, Dorin, 91k:22007  
 Mashimo, Katsuya (with Tasaki, Hiroyuki) Stability of closed Lie subgroups in compact Lie groups. 91g:22010  
 Matsuki, Toshihiko Closure relations for orbits on affine symmetric spaces under the action of minimal parabolic subgroups. 91e:22014  
 Sano, Shigeru Une intégrale invariante sur l'algèbre de Lie symétrique semi-simple. [An invariant integral on a semisimple symmetric Lie algebra] 91g:22011  
 Tasaki, Hiroyuki see Mashimo, Katsuya, 91g:22010  
 Tomanov, George On a conjecture of L. Auslander. 91g:22012  
 Wood, Jay A. Maximal abelian subgroups of spinor groups and error-correcting codes. 91d:22007

## Items with secondary classifications in 22E15

- Chacon, R. V. see Fomenko, A. T., 91f:22017  
 Chon, Inheung Weakly commutative Lie semigroups. 91k:22004  
 Doković, Dragomir Ž. On isometries of matrix spaces. 91m:15038  
 Fomenko, A. T. (with Chacon, R. V.) Recurrence formulas for homogeneous terms of a convergent series that represents a logarithm of a multiplicative integral on Lie groups. 91f:22017  
 Gorbatshev, V. V. see Vinberg, E. B.; et al., 91j:17004  
 Hebisch, Waldemar (with Sikora, Adam) A smooth subadditive homogeneous norm on a homogeneous group. 91m:22005  
 Lawson, Jimmie D. Embedding semigroups into Lie groups. 91k:22005  
 (Lettes, D. A.) see Onishchik, A. L., 91g:22001  
 Nesin, Ali (with Pillay, Anand) Some model theory of compact Lie groups. 91j:03038  
 Onishchik, A. L. (with Vinberg, E. B.) ★ Lie groups and algebraic groups. 91g:22001  
 — see also Vinberg, E. B.; et al., 91j:17004  
 Panasyuk, S. P. Metrizability in the space of subgroups of a Lie group. 91f:22007  
 Pillay, Anand see Nesin, Ali, 91j:03038  
 Sikora, Adam see Hebisch, Waldemar, 91m:22012  
 Snow, Dennis M. Weyl group orbits. 91j:20115  
 Vinberg, E. B. (with Gorbatshev, V. V.; Onishchik, A. L.) Structure of Lie groups and Lie algebras. (Russian) 91j:17004  
 — see also Onishchik, A. L., 91g:22001  
 Wood, Jay A. Self-orthogonal codes and the topology of spinor groups. 91e:94032  
 Xu, Sen Lin see Zhou, Jian, 91k:57049  
 Zhou, Jian (with Xu, Sen Lin)  $S^7$  without any construction of Lie group. (Chinese summary) 91k:57049

## 22E20 General properties and structure of other Lie groups

- Silman-Boutatour, Latifa Sur les champs de vecteurs invariants sur un espace hermitien symétrique. (English summary) [K-invariant vector fields on the Hermitian symmetric space  $G/K$ ] 91k:22011

## Items with secondary classifications in 22E20

- Boseck, Helmut Affine Lie supergroups. 91g:17006  
 Labotsky, Alexander Lattices of minimal covolume in  $SL_2$ : a non-Archimedean analogue of Siegel's theorem  $\mu \geq \pi/21$ . 91j:22010

## 22E25 Nilpotent and solvable Lie groups

- Banu, Olga see Simionescu, Corneliu; et al., 91e:22012 and 91k:22012  
 Fox, Jeffrey Adeles and the spectrum of compact nilmanifolds. 91e:22015  
 Hebisch, Waldemar (with Sikora, Adam) A smooth subadditive homogeneous norm on a homogeneous group. 91m:22012  
 Ludwig, Jean On the behaviour of sequences in the dual of a nilpotent Lie group. 91h:22012  
 Müller, Detlef A restriction theorem for the Heisenberg group. 91k:22021  
 Ovesea, Horiaana see Simionescu, Corneliu; et al., 91e:22012  
 Panasyuk, S. P. Normality in the space of subgroups of a Lie group. 91k:22022  
 Sikora, Adam see Hebisch, Waldemar, 91m:22012  
 Simionescu, Corneliu (with Banu, Olga; Ovesea, Horiaana) Classification des algèbres plates invariantes à gauche subordonnées au groupe Lie nilpotent  $G_4$ . (Romanian summary) [Classification of left-invariant flat algebras associated to the nilpotent Lie group  $G_4$ ] 91e:22012  
 — (with Banu, Olga; Tudor, Horiaana) Détermination des variétés affines associées aux groupes de Lie résolubles. [Determination of the affine varieties associated with solvable Lie groups] 91k:22012  
 Tudor, Horiaana see Simionescu, Corneliu; et al., 91k:22012

- Yuan, Jian The Plancherel formula on the generalized Heisenberg group  $G_n$  and its applications. (Chinese) 91h:22013

## Items with secondary classifications in 22E25

- An, You Shan (with Luo, Xue Bo) A fundamental solution of the operator  $\mathcal{L}_\alpha$  on the Heisenberg group  $H^n$ . 91h:22016  
 Arnal, D. (with Cortet, J.-C.) Représentations à des groupes exponentiels. (English summary) [★ representations of exponential groups] 91h:22014  
 Bekka, Mohammed E. B. (with Kaniuth, Eberhard) Topological Frobenius properties for nilpotent groups. 91a:22003  
 Bluman, George W. A reduction algorithm for an ordinary differential equation admitting a solvable Lie group. 91m:34002  
 — Invariant solutions for ordinary differential equations. 91m:34003  
 Boyon, Michel Ngulfo B. Sur les structures affines homotopes à zéro des groupes de Lie. [Homotopic-to-zero affine structures of Lie groups] 91g:53026  
 Cortet, J.-C. see Arnal, D., 91h:22014  
 Dooley, A. H. Solvability of differential operators on semiradial semidirect products. 91h:22017  
 Dziubański, Jacek A remark on a Marcinkiewicz-Hörmander multiplier theorem for some nondifferential convolution operators. 91a:43002  
 Geller, Daryl ★ Analytic pseudodifferential operators for the Heisenberg group and local solvability. 91d:58243  
 Gorbatshev, V. V. see Vinberg, E. B.; et al., 91j:17004  
 Kaniuth, Eberhard see Bekka, Mohammed E. B., 91a:22003  
 Luo, Xue Bo see An, You Shan, 91h:22016  
 Nagel, A. (with Ricci, Fulvio; Stein, Elias M.) Fundamental solutions and harmonic analysis on nilpotent groups. 91h:58279  
 Onishchik, A. L. see Vinberg, E. B.; et al., 91j:17004  
 Ricci, Fulvio see Nagel, A.; et al., 91h:58279  
 Snow, Joanne Erdman Invariant complex structures on four-dimensional solvable real Lie groups. 91e:32026  
 Stein, Elias M. see Nagel, A.; et al., 91h:58279  
 Thangavelu, S. Some uncertainty inequalities. 91h:43004  
 Vinberg, E. B. (with Gorbatshev, V. V.; Onishchik, A. L.) Structure of Lie groups and Lie algebras. (Russian) 91j:17004  
 Zahir, Hamid Adapted Fourier transform of Schwartz spaces for certain nilpotent Lie groups. 91j:22009

## 22E27 Representations of nilpotent and solvable Lie groups (special orbital integrals, non-type I representations, etc.)

- Arnal, D. (with Cortet, J.-C.) Représentations à des groupes exponentiels. (English summary) [★ representations of exponential groups] 91h:22014  
 — (with Cortet, J.-C.) Star representations of  $E(2)$ . 91j:22004  
 du Cloux, Fokko Représentations tempérées des groupes de Lie nilpotents. [Tempered representations of nilpotent Lie groups] 91a:22005  
 — Finite-length representations of nilpotent Lie groups. 91h:22015  
 Cortet, J.-C. see Arnal, D., 91h:22014 and 91j:22004  
 Fu, Cha Li Irreducible unitary representations for  $H_n \otimes \mathbb{R}^k$  and hypoellipticity of a class of left invariant differential operators. (Chinese. English summary) 91f:22011  
 Fujiwara, Hidenori (with Yamagami, Shigeru) Certaines représentations monomiales d'un groupe de Lie résoluble exponentiel. [Certain monomial representations of an exponential solvable Lie group] 91k:22023  
 Jørgensen, Palle E. T. Extensions of positive definite integral kernels on the Heisenberg group. 91m:22013  
 Lipsman, Ronald L. Harmonic analysis on exponential solvable homogeneous spaces: the algebraic or symmetric cases. 91k:22013  
 — Induced representations of completely solvable Lie groups. 91j:22005  
 — Orbital decompositions of representations of non-simply connected nilpotent groups. 91j:22006  
 Ludwig, Jean Topologically irreducible representations of the Schwartz-algebra of a nilpotent Lie group. 91a:22006  
 Yamagami, Shigeru see Fujiwara, Hidenori, 91k:22023  
 Items with secondary classifications in 22E27  
 van den Ban, E. P. (with Schlichtkrull, Henrik) Local boundary data of eigenfunctions on a Riemannian symmetric space. 91a:22007  
 Benoist, Yves Modules simples sur une algèbre de Lie nilpotente contenant un vecteur propre pour une sous-algèbre. [Simple modules over a nilpotent Lie algebra containing an eigenvector for a subalgebra] 91m:17009  
 Cotlar, Mischa (with Sadosky, Cora) Two-parameter lifting theorems and double Hilbert transforms in commutative and noncommutative settings. 91f:47006  
 Debergh, N. On  $(k = \frac{1}{2})$  coherent states for the harmonic oscillator. 91a:81072  
 Ducloux, Jean-Yves Formules d'inversion pour des intégrales orbitales. [Inversion formulas for orbital integrals] 91j:22011  
 Feig, Ephraim (with Micchelli, Charles A.)  $L^2$ -synthesis by ambiguity functions. 91a:42025  
 Ludwig, Jean On the behaviour of sequences in the dual of a nilpotent Lie group. 91h:22012  
 Micchelli, Charles A. see Feig, Ephraim, 91a:42025  
 Sadosky, Cora see Cotlar, Mischa, 91f:47006  
 Schafitzel, Reinhard Decompositions of regular representations of the canonical commutation relations. 91k:47110  
 Schlichtkrull, Henrik see van den Ban, E. P., 91a:22007

## 22E30 Analysis on real and complex Lie groups [see also 33C80, 43-XX]

- Alexopoulos, Georges Inégalités de Harnack paraboliques et transformées de Riesz sur les groupes de Lie résolubles à croissance polynomiale du volume. (English summary)

- [Parabolic Harnack inequalities and Riesz transforms on solvable Lie groups with polynomial growth] 91f:22012
- An, You Shan (with Luo, Xue Bo) A fundamental solution of the operator  $\mathcal{L}_\alpha$  on the Heisenberg group  $H^n$ . 91h:22016
- Anderson, Arlen (with Camporesi, Roberto) Intertwining operators for solving differential equations, with applications to symmetric spaces. 91f:22013
- Arthur, James G. Harmonic analysis of tempered distributions on semisimple Lie groups of real rank one. 91f:22014
- Baldoni Silva, M. W. (with Knapp, A. W.) A construction of unitary representations in parabolic rank two. 91h:22024
- van den Ban, E. P. (with Schlichtkrull, Henrik) Local boundary data of eigenfunctions on a Riemannian symmetric space. 91a:22007
- Beerends, R. J. A transmutation property of the generalized Abel transform associated with root system  $A_2$ . 91e:22013
- Burns, Robert J. (with Robinson, Derek W.) Schauder estimates on Lie groups. 91m:22014
- Camporesi, Roberto see Anderson, Arlen, 91f:22013
- Chacon, R. V. see Fomenko, A. T., 91f:22017
- Chen, Jie Cheng Heat kernels on normal Lie groups. 91m:22015
- Clozel, Laurent (with Delorme, Patrick) Le théorème de Paley-Wiener invariant pour les groupes de Lie réductifs. II. [The invariant Paley-Wiener theorem for reductive Lie groups. II] 91g:22013
- Cui, Shang Bin Local solvability of second-order transverse hyperbolic left invariant LPDO on Heisenberg groups. (Chinese) (Not in MR)
- Damek, Ewa Convergence of Poisson integrals on semidirect extensions of homogeneous groups. 91f:22015a
- Erratum: "Convergence of Poisson integrals on semidirect extensions of homogeneous groups". 91f:22015b
- Delorme, Patrick see Clozel, Laurent, 91g:22013
- Dooley, A. H. Solvability of differential operators on semiradial semidirect products. 91h:22017
- Ducoux, Jean-Yves Formules d'inversion pour des intégrales orbitales. (English summary) [Inversion formulas for some orbital integrals] 91d:22008
- El Hussein, Kahar Résolubilité semi-globale des opérateurs différentiels invariants sur les groupes de déplacements. (English summary) [Semiglobal solvability of invariant differential operators on groups of motions] 91f:22016
- ter Elst, Antonius Frederik Maria ★ Gevrey spaces related to Lie algebras of operators. 91e:22016
- On infinitely differentiable and Gevrey vectors for representation. 91j:22007
- Fomenko, A. T. (with Chacon, R. V.) Recurrence formulas for homogeneous terms of a convergent series that represents a logarithm of a multiplicative integral on Lie groups. 91f:22017
- Fu, Chu Li Local solvability for a class of nonhomogeneous left invariant differential operators on  $H_n \otimes \mathbb{R}^d$ . 91h:22018
- Garofalo, Nicola (with Lanconelli, Ermanno) Frequency functions on the Heisenberg group, the uncertainty principle and unique continuation. (French summary) 91h:22014
- Haricane, Pascale Fonctions généralisées sphériques sur  $G_C/G_R$ . [Generalized spherical functions on  $G_C/G_R$ ] 91h:22019
- Hilgert, Joachim A note on Howe's oscillator semigroup. (French summary) 91b:22008
- Applications of Lie semigroups in analysis. 91k:22025
- Kauderer, Mark Fourier-optics approach to the symplectic group. 91h:22020
- Kawazoe, Takeshi A transform on classical bounded symmetric domains associated with a holomorphic discrete series. 91h:22009
- Knapp, A. W. see Baldoni Silva, M. W., 91h:22024
- Lanconelli, Ermanno see Garofalo, Nicola, 91h:22014
- Léry-Bruhl, Pierre Résolubilité des opérateurs de Grushin et autres exemples. [Solvability of Grushin operators and other examples] 91b:22010
- Résolubilité d'opérateurs différentiels sur des espaces symétriques nilpotents. [Solvability of differential operators on nilpotent symmetric spaces] 91e:22017
- Luo, Xue Bo see An, You Shan, 91h:22016
- Moylan, Patrick Joseph Integral transforms on homogeneous spaces of the de Sitter and conformal groups. (see 91m:81007)
- Nagel, A. (with Ricci, Fulvio; Stein, Elias M.) Harmonic analysis and fundamental solutions on nilpotent Lie groups. 91m:22016
- Nomura, Takaaki Algebraically independent generators of invariant differential operators on a symmetric cone. 91h:22021
- Ohring, Peter Solvability of invariant differential operators on metabelian groups. 91f:22018
- Oshima, Toshio (with Saburi, Yutaka; Wakayama, Masato) A note on Ehrenpreis' fundamental principle on a symmetric space. 91g:22014
- Asymptotic behavior of spherical functions on semisimple symmetric spaces. 91e:22018
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- Bincer, Adam M. Parametrization of  $SU(n)$  with  $n-1$  orthonormal vectors. 91e:22026
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- Ramos, Eduardo (with Sah, Chih-Han; Shrock, R. E.) Algebras of diffeomorphisms of the  $N$ -torus. 91f:17043
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- Bergvelt, M. J. (with Guest, M. A.) Actions of loop groups on harmonic maps. 91k:58022
- Bratichkov, A. V. Two-dimensional chiral models with infinite-dimensional symmetry algebras. 91c:81066
- Brylinski, Jean-Luc Representations of loop groups, Dirac operators on loop space, and modular forms. 91f:58151
- Cleciura, Grzegorz (with Szachyba, Igor) Automorphisms and general charge conjugations. 91j:17022
- Dewker, J. S. Volume-preserving diffeomorphisms on the 3-sphere. 91h:58020
- Frappat, L. (with Ragoucy, E.; Sorba, P.; Thuillier, F.; Høegsen, H.) Generalized Kac-Moody algebras and the diffeomorphism group of a closed surface. 91m:17038
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- Gravesen, Jens Loop groups and Yang-Mills theory in dimension two. 91e:58042
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- Rodgers, V. G. J. *see* Rai, Balram, 91h:81152
- Rusakov, B. E. Loop averages in  $U(N)$  gauge theory on two-dimensional manifolds. 91k:81104
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- Antoine, Jean-P. *see* All, S. Twareque; et al., 91e:22027
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Thandapani, E. *see* Balasubramanian, G.; et al., 91d:11122

## 26-02 Research exposition (monographs, survey articles)

Items with secondary classifications in 26-02

Aubin, Jean-Pierre (with Frankowska, Halina) ★ Set-valued analysis. 91d:49001

Deng, Zong Qi (with Ruan, Shi Gui) A survey of Gronwall-Bellman inequalities. (Chinese. English summary) 91d:26018

Frankowska, Halina *see* Aubin, Jean-Pierre, 91d:49001

(Gamskrelidze, R. V.) *see* Analysis, 91c:00001

(Newton, Dan) *see* Analysis, 91c:00001

Ruan, Shi Gui *see* Deng, Zong Qi, 91d:26018

Items listed otherwise than by author

Analysis ★ Analysis. II. 91c:00001

Encyclopaedia of Mathematical Sciences ★ Analysis. II. 91c:00001

## 26-03 Historical (must also be assigned at least one classification number from Section 01)

Henstock, Ralph Introduction to the new integrals. (see 91i:26002)

Items with secondary classifications in 26-03

(Biermann, Kurt-Reinhard) *see* Weierstraß, Karl Theodor Wilhelm, 91i:01146

Boas, Ralph P. ♀ Indeterminate forms revisited. 91g:26003

— Indeterminate forms revisited. 91d:26002

Dorofeeva, A. V. The implicit function theorem and its connection with the theory of extremal problems. (Russian. English summary) 91i:01039

Dunham, William A historical gem from Vito Volterra. 91g:01018

(Edwards, Joseph) *see* Scott, Charlotte Angus, 91c:01038

Guicciardini, Niccolò ★ The development of Newtonian calculus in Britain 1700-1800. 91c:01010

Rosenstein, George M., Jr. The best method. American calculus textbooks of the nineteenth century. 91c:01037

Scott, Charlotte Angus Edwards' differential calculus. An elementary treatise on the differential calculus, with applications and numerous examples. 91c:01038

(Sigmund-Schultze, Reinhard) *see* Weierstraß, Karl Theodor Wilhelm, 91i:01146

Weierstraß, Karl Theodor Wilhelm ★ Ausgewählte Kapitel aus der Funktionenlehre. (German) [Selected chapters from function theory] 91i:01146

## 26-06 Proceedings, conferences, collections, etc.

(Bullen, P. S.) *see* New Integrals, 91i:26002

(Everitt, W. Norrie) *see* Inequalities, 91m:26002

(Lee, Peng Yee) *see* New Integrals, 91i:26002

(Mawhin, J. L.) *see* New Integrals, 91i:26002

(Muldowney, Pat) *see* New Integrals, 91i:26002

(Pfeffer, Washek F.) *see* New Integrals, 91i:26002

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Birmingham ★ Inequalities. 91m:26002

Coleraine ★ New integrals. 91i:26002

Conference:

Inequalities ★ Inequalities. 91m:26002

Inequalities ★ Inequalities. 91m:26002

Lecture Notes in Mathematics ★ New integrals. 91i:26002

New Integrals ★ New integrals. 91i:26002

Symposium:

Real Analysis ★ New integrals. 91i:26002

## 26Axx Functions of one variable

### 26A03 Foundations: limits and generalizations, elementary topology of the line

Ganguly, D. K. (with Ray, S.) Some properties of functions related to the Cantor type set  $C_t$ . 91g:26002

Ray, S. *see* Ganguly, D. K., 91g:26002

Wang, Xing Hua (with Weng, Hui Ming) The theory of "using straight lines to represent curves". (Chinese) 91e:26001

Weng, Hui Ming *see* Wang, Xing Hua, 91e:26001

Items with secondary classifications in 26A03

Benešová, Mária (with Šalát, Tibor) On proofs of existence of the  $m$ th root and the logarithm of positive numbers. (Russian and Slovak summaries) 91a:11012

Grigas, G. Moyennes limites et convexité. (English summary) [Mean limit values and convexity] 91k:11014

Kirchheim, Bernd On sets of points of semicontinuity in fine topologies generated by an ideal. 91m:54013

Labhalla, Salah (with Lombardi, Henri) Comparaison des complexités des nombres réels dans différentes représentations (à la Cauchy, à la Dedekind, par fractions

continues). (English summary) [Comparison of the complexities of real numbers in some representations (via Cauchy sequences, via Dedekind cuts, or by continued fractions)] 91h:03053

Lombardi, Henri *see* Labhalla, Salah, 91h:03053

Šalát, Tibor *see* Benešová, Mária, 91a:11012

### 26A06 One-variable calculus

Aczél, János Functional equations and L'Hôpital's rule in an exact Poisson derivation. (Not in MR)

Boas, Ralph P. ♀ Indeterminate forms revisited. 91g:26003

— Indeterminate forms revisited. 91d:26002

Burgess, C. E. Continuous functions and connected graphs. 91a:26001

Embry-Wardrop, Mary An old max-min problem revisited. (Not in MR)

Epperson, James F. On the use of iteration methods for approximating the natural logarithm. 91a:26002

Folland, G. B. Remainder estimates in Taylor's theorem. 91b:26001

Gao, Yu Some notes on proving differential intermediate value theorems. (Chinese. English summary) 91b:26002

Hall, Richard L. Some oscillating integrands with small ripples. 91b:26003

Hartig, Donald L'Hôpital's rule via integration. (Not in MR)

Horwitz, Alan L. Reconstructing a function from its set of tangent lines. 91a:26003

Ioakimidis, N. I. Generalized Mangler-type principal value integrals with an application to fracture mechanics. 91d:26003

(Jacobson, B.) *see* Wong, Jingcheng, 91b:26004

Kuzmichenko, V. M. Generalized Taylor series for the class of functions  $H(p, m)$ . 91g:26004

Poffald, Esteban I. The remainder in Taylor's formula. 91c:26002

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Items with secondary classifications in 26A06

Bergeron, François (with Reutenauer, Christophe) Combinatorial resolution of systems of differential equations. III. A special class of differentially algebraic series. 91m:05010

Carlson, B. C. Landen transformations of integrals. 91m:33026

Leah, P. J. (with Wilker, J. B.) Hyperbolic and trigonometric crossing points. 91d:26004

Reutenauer, Christophe *see* Bergeron, François, 91m:05010

Wegner, T. An analytical method for calculation of integrals appearing in approximate solutions of deformable body mechanics. 91j:33001

Wilker, J. B. *see* Leah, P. J., 91d:26004

### 26A09 Elementary functions

Larsen, Mogens Esrom Wronskian harmony. 91b:26005

Leah, P. J. (with Wilker, J. B.) Hyperbolic and trigonometric crossing points. 91d:26004

Mirolla, Renato E. (with Strogatz, Steven H.) Integral representation of a finite spike. (Not in MR)

Strogatz, Steven H. *see* Mirolla, Renato E., (Not in MR)

Wilker, J. B. *see* Leah, P. J., 91d:26004

Items with secondary classifications in 26A09

Epperson, James F. On the use of iteration methods for approximating the natural logarithm. 91a:26002

Moh, Ivo A contribution to the equidistant analysis of a sum of exponentials. 91m:15006

### 26A12 Rate of growth of functions, orders of infinity, slowly varying functions [see also 26A48]

Golden, Kenneth M. (with Goldstein, Sheldon) Arbitrarily slow approach to limiting behavior. 91b:26001

Goldstein, Sheldon *see* Golden, Kenneth M., 91b:26001

Yang, Qi Fan Regularly varying functions and slowly varying functions. (Chinese. English summary) 91i:26003

Items with secondary classifications in 26A12

Gelek, J. L. Note on a theorem of Avakumović. 91i:34060

Marčič, Vojislav (with Radakin, Zvezdana) Regularly varying functions in asymptotic analysis. (Slovenian. English summary) (Not in MR)

Meise, Reinhold (with Taylor, B. Alan) Whitney's extension theorem for ultradifferentiable functions of Beurling type. 91b:46074

Murphree, Emily S. Some new results on the subexponential class. 91a:60043

Radakin, Zvezdana *see* Marčič, Vojislav, (Not in MR)

Taylor, B. Alan *see* Meise, Reinhold, 91b:46074

### 26A15 Continuity and related questions (modulus of continuity, semicontinuity, discontinuities, etc.) {For properties determined by Fourier coefficients, see 42A16; for those determined by approximation properties, see 41A25, 41A27.}

Bullen, P. S. (with Mukhopadhyay, S. N.) Generalized continuity of higher order symmetric derivatives. 91b:26006

Cater, F. S. On functions discontinuous on countable sets. 91b:26004

Ciesielski, Krzysztof (with Larson, Lee; Ostaszewski, Krzysztof) Density continuity versus continuity. 91c:26003

Gai, Sorin Gh. New Dini theorems for sequences which satisfy generalized Alexandrov conditions. (Romanian summary) 91g:26005

- Gibson, Richard G. Darboux functions with a perfect road. 91g:26006
- Goffman, C. (with Liu, Feng Ché) A remark on absolutely continuous functions. 91d:26005
- Humke, Paul D. (with Laczkovich, M.) A historical note on the measurability properties of symmetrically continuous and symmetrically differentiable functions. (Not in MR)
- Jarník, Jiří see Kurzweil, Jaroslav, [91i:26002]
- Jaskula, Janusz (with Szokopińska, Bożena) On the set of points of symmetric continuity. 91i:26005
- Kateřák, Josef (with Višňovský, Rudolf) Graphics of continuous functions and curves defined on finite structures of  $G$ -numbers. (Slovak. English, German, Russian and Czech summaries) (Not in MR)
- Kozyrev, S. B. The structure of cross sections of a typical continuous function by polynomials. (Russian) 91m:26003
- Kurzweil, Jaroslav (with Jarník, Jiří) The PU-integral: its definition and some basic properties. (see 91i:26002)
- Laczkovich, M. see Humke, Paul D., [91i:26003]
- Larson, Lee see Ciesielski, Krzysztof; et al., 91c:26003
- Liu, Feng Ché see Goffman, C., 91d:26005
- Liu, Yong Ping Relations between two moduli of continuity for functions defined on the whole real axis. (Chinese. English summary) 91g:26007
- Mukhopadhyay, S. N. see Bullen, P. S., 91b:26006
- Ostaszewski, Krzysztof see Ciesielski, Krzysztof; et al., 91c:26003
- Rychlewicz, Andrzej On the algebraic embeddability in the class of functions possessing connected graphs. 91i:26006
- Stróńska, Ewa On the functions approximately- and quasi-continuous which are almost everywhere discontinuous. (Polish summary) 91i:26007
- Szokopińska, Bożena see Jaskula, Janusz, 91i:26005
- Taan, Tan Cao Classes of weighted symmetric functions. 91e:26002
- Weighted symmetric functions. 91g:26008
- Višňovský, Rudolf see Kateřák, Josef, [91i:26003]

#### Items with secondary classifications in 26A15

- Buczolich, Zoltán (with Ostaszewski, Krzysztof) The Hausdorff dimension of graphs of density continuous functions. 91j:28008
- Burgess, C. E. Continuous functions and connected graphs. 91a:26001
- Friedman, Harvey M. (with Seress, Ákos) Decidability in elementary analysis. II. 91b:03075
- Grande, Zbigniew (with Soltyś, Leszek) Some remarks on quasi-continuous real functions. (Polish summary) 91j:54022
- Gurleashvili, R. I. Integral moduli of continuity and Fourier coefficients. (Russian. English summary) 91e:42003
- Kirchheim, Bernd On sets of points of semicontinuity in fine topologies generated by an ideal. 91m:54013
- Korenovskii, A. A. Mean oscillations and the Hilbert transform. 91f:42011
- Kumari, Suresh see Ram, Babu, 91h:42005
- Natkaniec, Tomasz Two remarks on almost continuous functions. (Polish summary) 91j:54023
- Ostaszewski, Krzysztof see Buczolich, Zoltán, 91j:28008
- Pálton, Radu Estimates with the second order modulus of continuity. 91j:41033
- Piotrowski, Z. Separate and joint continuity. II. 91h:54019
- Popov, Vasil A. see Sendor, Blagovest Kh., 91b:41013
- Ram, Babu (with Kumari, Suresh) On the integral modulus of continuity of Fourier series. 91h:42005
- Sendor, Blagovest Kh. (with Popov, Vasil A.) ★ The averaged moduli of smoothness. 91b:41013
- Seress, Ákos see Friedman, Harvey M., 91b:03075
- Soltyś, Leszek see Grande, Zbigniew, 91j:54022
- Suppes, Patrick (with Takahashi, Shuzo) An interactive calculus theorem-prover for continuity properties. 91a:68242
- Takahashi, Shuzo see Suppes, Patrick, 91a:68242
- Thomson, Brian S. An analogue of Charzyński's theorem. 91e:26008

### 26A16 Lipschitz (Hölder) classes

- Chalra, Abdellatif Homéomorphisme entre ouverts lipschitziens. (English summary) [Homeomorphism between Lipschitzian open sets] 91c:26004
- Ditzian, Zeév A new fractional form of the Landau-Kolmogorov inequality. 91c:26005
- Hata, Masayoshi Differentiable functions which do not satisfy a uniform Lipschitz condition of any order. 91g:26009
- Items with secondary classifications in 26A16
- Clarke, Frank H. (with Loewen, Philip D.) An intermediate existence theory in the calculus of variations. 91c:49061
- Grande, Zbigniew (with Stróńska, Ewa) Deux remarques concernant la densité des ensembles et les fonctions surposées continues. (Polish summary) [Two remarks concerning the density of sets and supercontinuous functions] 91g:28001
- Loewen, Philip D. see Clarke, Frank H., 91c:49061
- Lupa, Maria Form of Lipschitzian operator of substitution in some class of functions. (Russian and Polish summaries) 91d:47046
- Paluba, Waldemar The Lipschitz condition for the conjugacies of Feigenbaum-like mappings. 91c:26006
- Stróńska, Ewa see Grande, Zbigniew, 91g:28001
- Vladimirov, Yu. N. Problems on optimal displacement of a mass on surfaces and related Lipschitz functions. (Russian) 91m:49043
- On the determination of maximal Lipschitz functions. (Russian) (Not in MR)

### 26A18 Iteration [see also 39B12, 47H10, 54H25, 58F08, 58F13]

- Abundo, Mario see Silvan, Laura, 91h:26002
- Agronsky, S. J. (with Bruckner, Andrew M.; Laczkovich, M.) Dynamics of typical continuous functions. 91e:26003

- (with Bruckner, Andrew M.; Ceder, J. G.; Pearson, T. L.) The structure of  $\omega$ -limit sets for continuous functions. 91i:26008
- Bruckner, Andrew M. (with Ceder, J. G.; Pearson, T. L.) On  $\omega$ -limit sets for various classes of functions. 91i:26009
- Three methods of constructing  $\omega$ -limit sets. (Not in MR)
- see also Agronsky, S. J.; et al., 91e:26003 and 91i:26008
- Ceder, J. G. On noncontinuous chaotic functions. 91m:26004
- see also Agronsky, S. J.; et al., 91i:26008 and Bruckner, Andrew M.; et al., 91i:26009
- Feng, Ke Qin Some iterative recurrence formulas. (Chinese summary) 91k:26001
- Gloggenießer, H. Comment on: "Snowflake curve and recursion" [Praxis Math. 30 (1988), no. 8, 449–454; MR 91a:26005a] by K. Rüdiger. (German) 91a:26005b
- Kirsch, Arnold Comment on: "Snowflake curve and recursion" [Praxis Math. 30 (1988), no. 8, 449–454; MR 91a:26005a] by K. Rüdiger. (German) 91g:26010
- Laczkovich, M. see Agronsky, S. J.; et al., 91e:26003
- Paluba, Waldemar The Lipschitz condition for the conjugacies of Feigenbaum-like mappings. 91c:26006
- Pearson, T. L. see Agronsky, S. J.; et al., 91i:26008 and Bruckner, Andrew M.; et al., 91i:26009
- Rüdiger, Karlheinz Schneeflockenkurve und Rekursion. [Snowflake curve and recursion] 91a:26005a
- see also Gloggenießer, H., 91a:26005b and Kirsch, Arnold, 91g:26010
- Silvan, Laura (with Abundo, Mario) Dyadic expansion of the fractional part for real numbers. (Italian) 91h:26002
- Simon, Károly Typical continuous functions are not iterates. 91m:26005

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- Alhara, Takashi see Satoh, Kazuhiko, 91d:58171 and 91e:58102
- Biham, Ofer (with Wenzel, Wolfgang) Unstable periodic orbits and the symbolic dynamics of the complex Hénon map. 91j:58101
- Boyarsky, A. Fractal approximation by absolutely continuous invariant measures. 91g:58154
- Bruckner, Andrew M. (with Hu, Tê Chün) Equicontinuity of iterates of an interval map. 91e:58085
- Chen, Fang Yue Smooth solutions of Feigenbaum's functional equation. 91b:39011
- Cheng, Zhiming (with Savit, Robert) Structure factor of substitutional sequences. 91m:11114
- Chowdhury, K. see Roy Chowdhury, A., 91m:58117
- Derebail, Ramnath see Lucia, Angelo; et al., 91h:58157
- (Devaney, Robert L.) See Chaos and fractals, 91a:58130
- Fedorenko, V. V. see Sharkovskii, A. N.; et al., 91h:58065
- Fourcade, B. (with Tremblay, A.-M. S.) Amplitudes of multifractal moments at the onset of chaos: universal ratios and crossover functions. 91h:58145
- Fox, Ronald F. Master equation for the logistic map. 91k:82039
- Ge, Yuzhen (with Rusjan, Edmond; Zweifel, P. F.) Renormalization of binary trees derived from one-dimensional unimodal maps. 91m:58095
- Glendinning, Paul see Veitch, Darryl, 91k:58078
- Guo, Xinzhou see Lucia, Angelo; et al., 91h:58157
- Hao, Bai Lin (with Zheng, Wei Mou) Symbolic dynamics of unimodal maps revisited. 91g:58069
- see also Zheng, Wei Mou, 91h:58043
- Hata, Hiroki (with Horita, Takehiko; Mori, Hazime) Dynamic description of the critical  $2^\infty$  attractor and  $2^m$ -band chaos. 91d:58163a
- (with Horita, Takehiko; Mori, Hazime) Errata: "Dynamic description of the critical  $2^\infty$  attractor and  $2^m$ -band chaos". 91d:58163b
- see also Miyazaki, Syuji; et al., 91d:58161 and Yoshida, Takeshi; et al., 91d:58162
- Hatori, Tadatsugu see Ichikawa, Yoshi H.; et al., 91a:58116
- Honda, Katsuya see Sato, Shinichi, 91m:82095
- Horita, Takehiko see Miyazaki, Syuji; et al., 91d:58161; Yoshida, Takeshi; et al., 91d:58162; Hata, Hiroki; et al., 91d:58163a and 91d:58163b
- Hu, Tê Chün see Bruckner, Andrew M., 91m:58085
- Hubbard, John ☉ The beauty and complexity of the Mandelbrot set. 91f:58077
- Ichikawa, Yoshi H. (with Kamimura, Tetsuo; Hatori, Tadatsugu; Kim, Soo Yong) Stochasticity and symmetry of the standard map. 91a:58116
- Issa, Naoum see Ringland, John; et al., 91e:58083
- Jama, Danuta Period three and the stability almost everywhere. 91g:58187
- Kamimura, Tetsuo see Ichikawa, Yoshi H.; et al., 91a:58116
- (Keen, Linda) See Chaos and fractals, 91a:58130
- Keller, Gerhard Periodic orbits for interval maps. 91h:58087
- Khan, K. M. see Vul, E. B., 91g:58163
- Kim, Soo Yong see Ichikawa, Yoshi H.; et al., 91a:58116
- Kobayashi, Tatsuharu see Yoshida, Takeshi; et al., 91d:58162
- Kolyada, S. F. see Sharkovskii, A. N.; et al., 91h:58065
- Lamprea, J. P. (with Rica da Silva, A.; Sousa Ramos, J.)  $\otimes$ -product of Markov matrices. 91b:28013
- Lucia, Angelo (with Guo, Xinzhou; Richey, Paula J.; Derebail, Ramnath) Simple process equations, fixed-point methods, and chaos. 91h:58157
- Mira, Christian Chaotic behaviour of maps: fuzzy boundaries and chaotic transients. 91h:58112
- The Valiron's theorem and the imbedding of an endomorphism into a diffeomorphism having a higher dimension. 91m:58116
- Miyazaki, Syuji (with Mori, Nobuyuki; Yoshida, Takeshi; Mori, Hazime; Hata, Hiroki; Horita, Takehiko)  $q$ -phase transitions and critical phenomena just after band crises. 91d:58161
- see also Yoshida, Takeshi; et al., 91d:58162
- Mori, Hazime see Miyazaki, Syuji; et al., 91d:58161; Yoshida, Takeshi; et al., 91d:58162; Hata, Hiroki; et al., 91d:58163a and 91d:58163b
- Mori, Nobuyuki see Miyazaki, Syuji; et al., 91d:58161
- Nieva, A. On the statistical behavior of the orbits elements of the logistic equation  $4x(1-x)$ . (Spanish summary) 91e:58096
- Rica da Silva, A. see Lamprea, J. P.; et al., 91b:28013

- Richey, Paula J. *see* Lucia, Angelo; et al., 91b:58157
- Ringland, John (with Schell, Mark) The Farey tree embodied—in bimodal maps of the interval. 91c:58057
- (with Issa, Naoum; Schell, Mark) From  $U$  sequence to Farey sequence: a unification of one-parameter scenarios. 91c:58083
- Ray Chowdhury, A. (with Chowdhury, K.) Bifurcation in a coupled logistic map. Some analytic and numerical results. 91m:58117
- Ronjan, Edmond *see* Ge, Yuzhen; et al., 91m:58095
- Sato, Shinichi<sup>1</sup> (with Honda, Katsuya) Statistical physics of intermittency: phase transitions and fluctuations of scaling indices. 91m:82095
- Satoh, Kazuhiro (with Aihara, Takashi) Self-similar structures in the phase diagram of a coupled-logistic map. 91d:58171
- (with Aihara, Takashi) Numerical study on a coupled-logistic map as a simple model for a predator-prey system. 91e:58102
- Savit, Robert *see* Cheng, Zhenming, 91m:11114
- Schell, Mark *see* Ringland, John, 91c:58057 and 91c:58083
- Sharkovskii, A. N. (with Kolyada, S. F.; Sivak, A. G.; Fedorenko, V. V.) ★ Динамика одномерных отображений. (Russian) [Dynamics of one-dimensional mappings] 91k:58065
- Simon, Károly The set of second iterates is nowhere dense in  $C$ . 91g:58140
- Sivak, A. G. *see* Sharkovskii, A. N.; et al., 91k:58065
- Sousa Ramos, J. *see* Lampreia, J. P.; et al., 91b:28013
- Targowski, György Iteration theory and its functional equations. (Italian summary) 91j:58087
- Tremblay, A.-M. S. *see* Fourcade, B., 91b:58145
- Velich, Darryl (with Glendinning, Paul) Explicit renormalisation in piecewise linear bimodal maps. 91k:58078
- Vul, E. B. (with Khanin, K. M.) Homeomorphisms of the circle with fracture-type singularities. 91g:58163
- Weikamp, Jürgen On the conjugacy of hat functions. (Polish summary) 91d:58112
- Wenzel, Wolfgang *see* Biham, Ofer, 91j:58101
- Yoshida, Takeshi (with Miyazaki, Syuji; Mori, Hazime; Kobayashi, Tatsuhiro; Horita, Takehiko; Hata, Hiroki) The  $q$ -phase transition and critical scaling laws near the band-crisis point of chaotic attractors. 91d:58162
- *see also* Miyazaki, Syuji; et al., 91d:58161
- Zdan, Marek Cezary On quasi-continuous iteration semigroups and groups of real functions. 91e:54093
- Zheng, Wei Mou (with Hao, Bai Lin) Symbolic dynamics analysis of symmetry breaking and restoration. 91k:58043
- Applied symbolic dynamics for the Lorenz-like map. 91f:58026
- *see also* Hao, Bai Lin, 91g:58069
- Zweifel, P. F. *see* Ge, Yuzhen; et al., 91m:58095

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- Chaos and fractals ★ Chaos and fractals. 91a:58130
- Proceedings of Symposia in Applied Mathematics ★ Chaos and fractals. 91a:58130
- Providence, RI ★ Chaos and fractals. 91a:58130

## 26A21 Classification of real functions; Baire classification of sets and functions [see also 04A15, 28A05, 54C50]

- Bullen, P. S. (with Mukhopadhyay, S. N.) Properties of Baire-1 Darboux functions and some mean value theorems for Peano derivatives. 91m:26006
- Ciesielski, Krzysztof (with Larson, Lee; Ostaszewski, Krzysztof) Differentiability and density continuity. 91b:26007
- Filipczak, Tomasz Intersection conditions for some density and  $I$ -density local systems. 91d:26006
- Grande, Zbigniew Some remarks about Rosen's functions. 91k:26002
- Komjáth, Péter Ordered families of Baire-2-functions. 91d:26007
- Larson, Lee *see* Ciesielski, Krzysztof; et al., 91b:26007
- Mukhopadhyay, S. N. *see* Bullen, P. S., 91m:26006
- Ostaszewski, Krzysztof *see* Ciesielski, Krzysztof; et al., 91b:26007
- Săntoianu, Răvan On additive subgroups of real numbers. (Romanian. English summary) 91j:26001
- Stegall, Charles Functions of the first Baire class with values in Banach spaces. 91k:26003
- Wejdownski, Wojciech Density topology involving measure and category. 91a:26006

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- Bruckner, Andrew M. (with Ceder, J. G.; Pearson, T. L.) On  $\omega$ -limit sets for various classes of functions. 91e:26009
- Ceder, J. G. *see* Bruckner, Andrew M.; et al., 91e:26009
- Ciesielski, Krzysztof (with Larson, Lee; Ostaszewski, Krzysztof) Density continuity versus continuity. 91c:26003
- Kaczmarz, Bogusław On the measure and Borel type of the set of points of one-sided nondifferentiability. 91b:26011
- Kharazishvili, A. B. Martin's axiom and  $\Gamma$ -selectors. (Russian. English and Georgian summaries) 91k:03127
- Larson, Lee *see* Ciesielski, Krzysztof; et al., 91b:26003
- Maliszewski, Aleksander The algebra generated by derivatives which are continuous almost everywhere. 91c:26009
- Natkaniec, Tomasz Two remarks on almost continuous functions. (Polish summary) 91j:54023
- Ostaszewski, Krzysztof *see* Ciesielski, Krzysztof; et al., 91c:26003
- Pearson, T. L. *see* Bruckner, Andrew M.; et al., 91e:26009

## 26A24 Differentiation (functions of one variable): general theory, generalized derivatives, mean-value theorems [see also 28A15]

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- Pachpatte, B. G. On Sobolev-Lieb-Thirring type inequalities. 91m:26019
- A note on Lyapunov type inequalities. 91a:34028
- Petre, Jaak (with Persson, Lars-Erik) General Beckenbach's inequality with applications. 91b:26029
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 — (with Pečarić, Josip E.) Refinements of some inequalities for isotonic functionals. 91g:26033  
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### 26E20 Calculus of functions taking values in infinite-dimensional spaces [see also 46E40, 46G10, 58Cxx]

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- Kadets, V. M. Characterization of  $B$ -convex spaces in terms of the behavior of integral sums. (Russian) 91f:46026  
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### 26E25 Set-valued functions [see also 28B20, 54C60] {For nonsmooth analysis, see 49J52, 58Cxx, 90Cxx.}

- Bulgakov, A. I. On the existence of continuous branches of multivalued mappings with nonconvex images. (Russian) 91e:26013  
 Maritz, P. On some aspects of open multifunctions. (see 91i:26002)  
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### 26E30 Non-Archimedean analysis [see also 12J25]

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- Bhaskaran, R. (with Karunakaran, V.) Analytic functions over valued fields. 91m:12014  
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## 26E35 Nonstandard analysis [see also 03H05, 28E05, 54J05]

Hoskins, Roy Frank ★ Standard and nonstandard analysis. 91g:26034

Seko, Bobo Quelques histoires simples pour David. [Some simple stories for David] 91h:26023

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Simpson, Adrian P. The infidel is innocent. 91g:26035

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Cutland, Nigel J. Transfer theorems for  $\pi$ -monads. 91c:03050

Diener, Francine (with Reeb, Georges) ★ Analyse non standard. (French) [Nonstandard analysis] 91k:03157

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Todorov, Todor D. A nonstandard delta function. 91c:46066

Tortorelli, V. M. A characterization of internal sets. 91k:03129

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Singh, D. N. (with Lai, R. N.; Modi, D. K.) Probabilisation and fuzzification of number systems. (Not in MR)

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## 26E99 None of the above, but in this section

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## 28-XX Measure and integration {For analysis on manifolds, see 58-XX.}

### 28-01 Instructional exposition (textbooks, tutorial papers, etc.)

Aliprantis, Charalambos D. (with Burkinshaw, Owen) ★ Principles of real analysis. 91c:28001

— (with Burkinshaw, Owen) ★ Problems in real analysis. 91c:28002

Bauer, Heinz ★ Maß- und Integrationstheorie. (German) [Theory of measure and integration] 91k:28001

Burkinshaw, Owen see Aliprantis, Charalambos D., 91c:28001 and 91c:28002

Henstock, Ralph ★ Lectures on the theory of integration. 91a:28001

Items with secondary classifications in 28-01

(Bensoussan, Alain) see Samuëlides, M., 91c:46002

(Boron, Leo F.) see Riesz, Frigyes, 91g:00002

Dudley, Richard M. ★ Real analysis and probability. 91g:60001

Hoskins, Roy Frank ★ Standard and nonstandard analysis. 91g:26034

Riesz, Frigyes (with Székely-Nagy, Béla) ★ Functional analysis. 91g:00002

Samorodnitskii, A. A. ★ Теория меры. (Russian) [Measure theory] 91k:28004

Samuëlides, M. (with Touzillier, L.) ★ Analyse fonctionnelle. (French) [Functional analysis] 91c:46002

Székely-Nagy, Béla see Riesz, Frigyes, 91g:00002

Touzillier, L. see Samuëlides, M., 91c:46002

### 28-02 Research exposition (monographs, survey articles)

Items with secondary classifications in 28-02

Aubin, Jean-Pierre (with Frankowska, Halina) ★ Set-valued analysis. 91d:49001

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### 28-03 Historical (must also be assigned at least one classification number from Section 01)

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Bishop, Errett ★ Selected papers. 91b:01091

Bryl'evskaya, L. I. On a discussion of the problem of the existence of nonmeasurable sets. (Russian. English summary) 91c:01050

(Kolmogorov, A. N.) see Sinai, Ya. G., 91c:01017

(Rokhlin, V. A.) see Yuzvinsky, Sergey, 91b:01074 and Weiss, Benjamin, 91b:01075

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### 28Axx Classical measure theory

Items with secondary classifications in 28Axx

Kharazishvili, A. B. ★ Приложение теории множеств. (Russian) [Applications of set theory] 91m:04001

### 28A05 Classes of sets (Borel fields, $\sigma$ -rings, etc.), measurable sets, Suslin sets, analytic sets [see also 03E15, 04A15, 26A21, 54H05]

Balcerek, Marek On some ideals and related algebras of sets in the plane. 91d:28001

Crnjak, Miljenko (with Guljaš, Boris; Miller, Harry I.) On a question of H. Kraljević. 91h:28001a

— see also Miller, Harry I., 91h:28001b

Grande, Zbigniew (with Strońska, Ewa) Deux remarques concernant la densité des ensembles et les fonctions surpassement continues. (Polish summary) [Two remarks concerning the density of sets and supercontinuous functions] 91g:28001

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Hejduk, Jacek Universal sequences in the space of real measurable functions. (Russian and Polish summaries) 91d:28002

Hindman, Neil On creating sets with large lower density. 91k:28002

Jasiński, Jakub (with Weiss, Tomasz) Sierpiński sets and strong first category. 91d:28003

Johnson, Roy A. A minimal family of open intervals generating the Borel sets. (Not in MR)

Just, Winfried (with Laflamme, Claude) Classifying sets of measure zero with respect to their open covers. 91a:28003

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— Borel measures in metric spaces. (Russian. English and Georgian summaries) 91h:28002

— Some problems connected with the Lebesgue measure and the Baire property. (Russian. English and Georgian summaries) 91k:28003

Laflamme, Claude see Just, Winfried, 91a:28003

Li, Shi Jie Some problems on Borel sets and Lebesgue-Stieltjes measurable sets. (Chinese. English summary) 91h:28001

Majumdar, P. K. Some properties of Cantor's ternary set. (Not in MR)

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— Addendum: "On a question of H. Kraljević" [Aequationes Math. 39 (1990), no. 1, 55–67; MR 91h:28001a] by M. Crnjak, B. Guljaš and Miller. 91h:28001b

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- Orwat, Waldemar Some strong zero-measure sets. (Polish. English summary) 91h:04002
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- Repický, M. Porous sets and additivity of Lebesgue measure. 91a:03098
- Sarkhel, D. N. Closed-category spaces and measurability. 91j:18011
- Seredyński, Witold Some operations related with translation. 91h:03085
- Shevchenko, Yu. A. On Vitali's covering theorem. 91a:54063
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- Vlad, Carmen Properties of Wallman type spaces. 91m:54005
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## 28A10 Real- or complex-valued set functions

- Armstrong, Thomas E. A characterization of nonatomic probabilities on  $[0, 1]$  with nowhere dense supports. 91g:28003
- Barone, E. (with Rao, K. P. S. Bhaskara) On the Loś-Marczewski extension of charges and its uniqueness. 91c:28001
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- Kominek, Zygfryd (with Miller, Harry L.) On functions that preserve a certain class of sets. (Italian summary) 91h:28003
- Kranz, Przemot T. Extension of tight set functions. 91j:28002
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- Rao, K. P. S. Bhaskara see Barone, E., 91c:28001
- Scheinberg, Stephen The Lebesgue decomposition. 91m:28001
- Squillante, M. (with Ventre, Aldo G. S.) A Yosida-Hewitt like theorem for  $\perp$ -decomposable measures. 91g:28004a
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- Gilmore, Robert see Hou, Xin-Jun; et al., (Not in MR)
- Handy, C. R. (with Mantica, G.) Inverse problems in fractal construction: moment method solution. 91c:58099
- Heesterbeek, J. A. P. (with van Neerven, J. M. A. M.; Schellinx, H. A. J. M.; Zwaan, M.) The nature of fractal geometry. 91j:58091
- Herrmann, Hans J. (with Mantica, G.; Bessis, Daniel) Space-filling bearings. 91j:52022
- Horn, Alastair N. IFSs and the interactive design of tiling structures. (see 91i:58094)
- Hou, Xin-Jun (with Gilmore, Robert; Mindlin, Gabriel B.; Solari, Hernán G.) An efficient algorithm for fast  $O(N \cdot \ln(N))$  box counting. (Not in MR)
- Jones, Huw Fractals before Mandelbrot: a selective history. (see 91i:58094)
- see also Crilly, A. J.; et al., (91i:58094) and Fractals and chaos, 91i:58094
- Kaandorp, J. A. Modelling growth forms of sponges with fractal techniques. (see 91i:58094)
- Kaye, Brian H. ★ A random walk through fractal dimensions. 91i:00013
- Kigami, Jun A harmonic calculus on the Sierpiński spaces. 91g:31005
- Klafter, J. see Zamofen, G.; et al., 91m:92047
- Mandelbrot, Benoit B. New "anomalous" multiplicative multifractals: left sided  $f(\alpha)$  and the modelling of DLA. 91j:82031
- Mantica, G. see Handy, C. R., 91c:58099 and Herrmann, Hans J.; et al., 91j:52022
- Massopust, Peter R. Fractal surfaces. 91g:58168
- Meester, Ronald W. J. see Dekking, F. M., 91c:60140
- Mindlin, Gabriel B. see Hou, Xin-Jun; et al., (Not in MR)
- Mosolov, A. B. see Dinariev, O. Yu., 91d:28017
- van Neerven, J. M. A. M. see Heesterbeek, J. A. P.; et al., 91j:58091
- Okawa, Tohru Tessellations and fractals. (Japanese. English summary) 91e:52033
- Schellinx, H. A. J. M. see Heesterbeek, J. A. P.; et al., 91j:58091
- Schellnhuber, H. J. see Block, A.; et al., 91h:65015
- Shiota, Yasunobu Remarks on self-similarity. 91f:54017
- Solari, Hernán G. see Hou, Xin-Jun; et al., (Not in MR)
- Strichartz, Robert S. Fourier asymptotics of fractal measures. 91m:42015
- Vaz, Jayme Jr. Towards a general theory of convolutive sets with applications to fractals. (Not in MR)
- Wang, Chang Yi (with Bassingthwaite, J. B.) Area-filling distributive network model. 91m:92014
- West, Bruce J. Sensing scaled scintillations. 91g:78011
- Zamofen, G. (with Blumen, A.; Klafter, J.) The role of fractals in chemistry. 91m:92047
- Zwaan, M. see Heesterbeek, J. A. P.; et al., 91j:58091

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Fractals and chaos ★ Fractals and chaos. 91i:58094

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- Mikusiński, Piotr (with Sherwood, H.; Taylor, M. D.) Łojasiewicz's support and doubly stochastic measures. 91g:28014
- Sherwood, H. see Mikusiński, Piotr; et al., 91g:28014
- Taylor, M. D. see Mikusiński, Piotr; et al., 91g:28014

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- Laczko, M. Equidecomposability and discrepancy; a solution of Tarski's circle-squaring problem. 91b:51034
- Lipovan, Octavian A probabilistic approach to the concept of submeasurability and the decomposition theorems for  $\Delta$ -additive multivalued set mappings. (Romanian. English summary) 91f:60013
- Shortt, Rae Michael Duality for cardinal algebras. 91i:00007
- Wright, J. D. Maitland Paradoxical decompositions of the cube and injectivity. 91f:46088
- Yu, Xiaokang Radon-Nikodým theorem is equivalent to arithmetical comprehension. 91h:03085
- Zakharov, Valerii Konstantinovich A universal measurable extension and the Arens extension of the Banach algebra of continuous functions. 91j:46058
- Zakrzewski, Piotr Paradoxical decompositions and invariant measures. 91f:04007

## 28Bxx Set functions, measures and integrals with values in abstract spaces

### 28B05 Vector-valued set functions, measures and integrals [see also 46G10]

- Drewnowski, Lech On the Baire category of some collections of sets in measure spaces. 91i:28005
- Ganley, I. G. Semivariation and the Riesz-Markov theorem for operator-valued measures. (Russian) (see 91b:00031)
- Hess, Christian On multivalued martingales whose values may be unbounded: martingale selectors and Mosco convergence. 91g:28015
- Jefferies, Brian Integration with respect to the product of a measure and a closable set function. 91d:28022
- (Khan, M. Ali) see Papageorgiou, Nikolaos S., 91h:28011
- Kusraev, A. G. (with Malyugin, S. A.) The projective limit of vector measures. 91d:28023 (Majumdar, Mukul) see Papageorgiou, Nikolaos S., 91h:28011
- Malyugin, S. A. see Kusraev, A. G., 91d:28023
- Musiał, Kazimierz Pettis integration of dominated functions. 91h:28010
- Ohba, Sachio Ranked-vector-space valued measures. III. (Japanese. English summary) (Not in MR)
- Papageorgiou, Nikolaos S. On a paper by M. A. Khan and M. Majumdar: "Weak sequential convergence in  $L_1(\mu, X)$  and an approximate version of Fatou's lemma" [J. Math. Anal. Appl. 114 (1986), no. 2, 569-573; MR 87m:28004]. 91h:28011
- Sudakov, V. N. On the decomposition of vector-valued additive functions. (Russian) 91m:28009
- Tardella, Fabio A new proof of the Lyapunov convexity theorem. 91c:28009
- Trendafilov, N. The Pettis integration via uniform distributed sequences and its application. 91m:28010
- Uglanov, A. V. The Fubini theorem for vector measures. 91k:28011

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- Batty, Charles J. K. Vector-valued Choquet theory and transference of boundary measures. 91f:46061
- Castaing, Charles (with Clauzure, P.) Version multivoque et vectorielle d'un résultat de Brooks-Chacon. [Multivalued and vectorial versions of a result of Brooks and Chacon] 91c:46049
- Chen, Pei De see Jiang, Tao<sup>3</sup>, 91c:46063
- Clauzure, P. see Castaing, Charles, 91c:46049
- Dobrák, Ivan On integration in Banach spaces. XII. Integration with respect to polymeasures. 91f:46052
- On integration in Banach spaces. XIII. Integration with respect to polymeasures. 91h:46042
- Duchón, Miloslav On vector measures and distributions. (Russian summary) 91d:46048
- Emmanuele, G. (with Musiał, Kazimierz) Weak precompactness in the space of Pettis integrable functions. 91f:46050
- Giannakoulas, E. M. Markushevich bases and vector measures. 91j:46051
- Janicka, Liliana Radon-Nikodým problem for the variation of a vector measure. 91h:46049
- Jiang, Tao<sup>3</sup> (with Chen, Pei De) Orthogonal vector measures. 91c:46063
- Kakihara, Yūichirō see Molnár, Lajos, 91h:46062
- Kusraev, A. G. (with Malyugin, S. A.) Product and projective limit of vector measures. (Russian) 91k:46043
- Kuznetsova-Sholpo, I. A. (with Rachev, Svetlozar T.) Explicit solutions of moment problems. I. 91g:60009
- Malyugin, S. A. see Kusraev, A. G., 91h:46043
- Miyadera, Ryohel Characterizations of conditional expectation operators for  $L_p$ -valued functions on a general measure space. 91m:47045
- Molnár, Lajos (with Kakihara, Yūichirō) A remark on Hilbert-Schmidt operator valued c.a.g.o.s. measures. 91h:46082
- Musiał, Kazimierz (with Plebanek, Grzegorz) Pettis integrability and the equality of the norms of the weak\* integral and the Dunford integral. 91c:46064
- see also Emmanuele, G., 91f:46050
- Plebanek, Grzegorz see Musiał, Kazimierz, 91c:46064
- Rachev, Svetlozar T. see Kuznetsova-Sholpo, I. A., 91g:60009
- Ricker, Werner J. Completeness of the  $L^1$ -space of closed vector measures. 91h:46048
- Rodriguez-Piazza, Luis The range of a vector measure determines its total variation. 91c:46053
- Schmidt, Klaus D. ★ Jordan decompositions of generalized vector measures. 91e:46054
- Wu, Cong Xin (with Zhang, Bo<sup>1</sup>) A Riemann-Stieltjes integral for abstract functions. (Chinese. English summary) 91j:26009
- Yaseen, U. J. On the range of vector measure in locally convex spaces. 91h:46083
- Zhang, Bo<sup>1</sup> see Wu, Cong Xin, 91j:26009

### 28B10 Group- or semigroup-valued set functions, measures and integrals

- Blendes, Gheorghe see Blendes, Valentina, 91k:28012
- Blendes, Valentina (with Blendes, Gheorghe) On decomposition of group-valued submeasures. 91k:28012
- Guariglia, Emma On Dieudonné's boundedness theorem. 91k:28013
- de Lucia, Paolo (with Morales, Pedro) Some consequences of the Brooks-Jewett theorem for additive uniform semigroup-valued functions. 91d:28024
- Martellotti, Anna (with Sambucini, Anna R.) Riesz space valued submeasures and application to group-valued finitely additive measures. 91d:28025
- Morales, Pedro see de Lucia, Paolo, 91d:28024
- Sambucini, Anna R. see Martellotti, Anna, 91d:28025
- Singer, Boris Limits of stochastic topological projective systems. 91k:28014

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- D'Andrea, Anna Bruna (with de Lucia, Paolo) The Brooks-Jewett theorem on an orthomodular lattice. 91m:06019
- Lipovan, Octavian Decompositions in the Lebesgue meaning of the probabilistic measures. 91e:28006
- de Lucia, Paolo see D'Andrea, Anna Bruna, 91m:06019

### 28B15 Set functions, measures and integrals with values in ordered spaces

- Cherkaeva, E. A. see Dyubin, G. N., 91m:28011
- Dyubin, G. N. (with Cherkaeva, E. A.) Measures that are generated by set functions. (Russian) 91m:28011
- Hrachovina, Ervín The construction of a vector measure from a content. (Russian and Slovak summaries) 91m:28012
- A generalization of the Kolmogorov consistency theorem for vector measures. (Russian and Slovak summaries) 91m:28013
- Precupanu, Anca-Maria On certain Nykodým type theorems for multimeasures. 91m:28014
- Riečanová, Zdena On consequences of the Banach-Kuratowski theorem for Stone algebra valued measures. (Russian summary) 91k:28015

Items with secondary classifications in 28B15

- Ballvé, Maria E.  $L^p$  spaces for operator valued measures. (French summary) 91k:46041
- Gordon, Russell A. The McShane integral of Banach-valued functions. 91m:26010
- Luxemburg, W. A. J. Ordered algebraic structures in analysis. 91m:46016
- Martellotti, Anna (with Sambucini, Anna R.) Riesz space valued submeasures and application to group-valued finitely additive measures. 91d:28025
- Sambucini, Anna R. see Martellotti, Anna, 91d:28025

### 28B20 Set-valued set functions and measures; integration of set-valued functions; measurable selections [see also 26E25, 54C60, 54C65, 90A14]

- Appling, William D. L. Min and max functions, Bochner-Radon-Nikodým approximations, and a representation characterization. 91d:28026
- De Biasi, Francesco S. (with Myjak, József) Sur le prolongement des multifonctions séparément mesurables et séparément continues. (Italian summary) [On the extension of separately measurable and separately continuous multifunctions] 91j:28009
- Hess, Christian Convergence of conditional expectations for unbounded random sets, integrands and integral functionals. 91h:28006
- Kandilakis, Dimitrios (with Papageorgiou, Nikolaos S.) Correction on: "On the properties of the Aumann integral with applications to differential inclusions and control systems" [Czechoslovak Math. J. 39(114) (1989), no. 1, 1-15; MR 90b:28013]. 91m:28015
- Komuro, Naoto Convex operators and convex integrands. 91g:28016
- Ma, Ji Feng (with Zhang, Wen Xiu) The Radon-Nikodým theorem of bounded set-valued measures. 91d:28027
- Mauldin, R. Daniel (with Schlee, Glen A.) Borel measurable selections and applications of the boundedness principle. 91f:28004
- Myjak, József see De Biasi, Francesco S., 91j:28009
- Papageorgiou, Nikolaos S. Properties of the trajectories of set-valued integrals in Banach spaces. 91h:28007
- On transition multimeasures with values in a Banach space. 91h:28012a
- On transition multimeasures with values in a Banach space. 91h:28012b
- see also Kandilakis, Dimitrios, 91m:28015
- Schlee, Glen A. see Mauldin, R. Daniel, 91f:28004
- Suslov, S. I. Closure of a set of measurable selectors. (Russian) 91e:28010
- Xue, Xiao Ping Pettis-Aumann integration. 91h:28008
- Zhang, Wen Xiu see Ma, Ji Feng, 91d:28027

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- Anichini, Giuseppe Approximate selections and Peanian-valued multifunctions. 91e:34013
- Bán, J. Radon-Nikodým theorem and conditional expectation of fuzzy-valued measures and variables. 91d:28044
- Castaing, Charles (with Clauzure, P.) Version multivoque et vectorielle d'un résultat de Brooks-Chacon. [Multivalued and vectorial versions of a result of Brooks and Chacon] 91c:46049
- Clauzure, P. see Castaing, Charles, 91c:46049
- Fryzkowski, Andrzej Continuous selections of Aumann integrals. 91i:54017
- Hess, Christian On multivalued martingales whose values may be unbounded: martingale selectors and Mosco convergence. 91g:28015
- Measurability and integrability of the weak upper limit of a sequence of multifunctions. 91k:49014
- Kharazishvili, A. B. Martin's axiom and  $\Gamma$ -selectors. (Russian. English and Georgian summaries) 91k:03127
- King, Alan J. Generalized delta theorems for multivalued mappings and measurable selections. 91k:60007
- Papageorgiou, Nikolaos S. Convergence and representation theorems for set valued random processes. 91a:60032

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- Crstici, Borislav (with Lipovan, Octavian) A probabilistic approach to the integrability concept. 91f:28005
- Kharazishvili, A. B. The Baire property and nonmeasurable sets. (Russian. English and Georgian summaries) 91c:28010
- Lipovan, Octavian see Crstici, Borislav, 91f:28005
- Pap, Endre Nikodým type theorem for metric valued  $x_0$ -exhaustive set functions. (Serbo-Croatian summary) 91m:28016
- Spakowski, Andrzej On superpositionally measurable multifunctions. 91h:28010

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- Squillante, M. (with Ventre, Aldo G. S.) A Yosida-Hewitt like theorem for  $L$ -decomposable measures. **91g:28004a**  
 — (with Ventre, Aldo G. S.; Weber, Siegfried) Closure and convergence properties for classes of decomposable measures. (Italian summary) **91g:28004b**  
 Ventre, Aldo G. S. *see* Squillante, M., **91g:28004a** and **91g:28004b**  
 Weber, Siegfried *see* Squillante, M.; et al., **91g:28004b**

## 28Cxx Set functions and measures on spaces with additional structure [see also 46G12, 58C35, 58D20]

### 28C05 Integration theory via linear functionals (Radon measures, Daniell integrals, etc.), representing set functions and measures

- Demengel, Françoise (with Tang, Qi) Convex function of a measure obtained by homogenization. **91g:28017**  
 Mikusiński, Piotr On the Daniell integral. **91a:28008**  
 Tang, Qi *see* Demengel, Françoise, **91g:28017**

Items with secondary classifications in 28C05

- Dvurečenskij, Anatolij *see* Pulmannová, Sylvia, **91k:81013**  
 Pulmannová, Sylvia (with Dvurečenskij, Anatolij) Quantum logics, vector-valued measures and representations. (French summary) **91k:81013**  
 Schaefer, Helmut H. Radon, Baire, and Borel measures on compact spaces. I. **91e:46032**  
 — Radon, Baire, and Borel measures on compact spaces. II. **91e:46033**  
 van Wickeren, Erich Sequential convergence in the space of functions Riemann integrable on arbitrary sets. **91g:28006**

### 28C10 Set functions and measures on topological groups, Haar measures, invariant measures [see also 22Axx, 43A05]

- Boccato, Antonio (with Candeloro, Domenico) A sandwich-type theorem for invariant measures. **91k:28016a**  
 — (with Candeloro, Domenico) Sandwich theorems and applications to invariant measures. **91k:28016b**  
 Brogini Bratti, Adriana An extension to normed lattices of a dichotomic theorem of Okazaki. (Italian. English summary) **91c:28011**  
 Candeloro, Domenico *see* Boccato, Antonio, **91k:28016a** and **91k:28016b**  
 Cieśliński, Krzysztof Isometrically invariant extensions of Lebesgue measure. **91c:28012**  
 Das, S. K. (with Ray, K. C.) On sets of positive measure in a topological group. **91a:28009**  
 Destrempe, François (with Sengupta, Ambar) Configurations of points in sets of positive measure and in Baire sets of second category. **91h:28013**  
 Kirtadze, A. P. Nonseparable extensions of invariant measures in infinite-dimensional vector spaces that have the uniqueness property. (Russian. English and Georgian summaries) **91i:28009**  
 Krawczyk, Adam (with Zakrzewski, Piotr) Extensions of measures invariant under countable groups of transformations. **91j:28010**  
 Lahiri, B. K. *see* Saha, P. K., **91c:28014**  
 Okazaki, Yoshiaki (with Takahashi, Yasuji) The structure of the quasi-invariant set of a linear measure. **91m:28017**  
 Omiadze, K. T. Absolutely negligible sets. (Russian. English and Georgian summaries) **91c:28013**  
 Ray, K. C. *see* Das, S. K., **91a:28009**  
 Saha, P. K. (with Lahiri, B. K.) Relative measurability in topological groups. **91c:28014**  
 Sengupta, Ambar *see* Destrempe, François, **91h:28013**  
 Takahashi, Yasuji *see* Okazaki, Yoshiaki, **91m:28017**  
 Zakrzewski, Piotr *see* Krawczyk, Adam, **91j:28010**

Items with secondary classifications in 28C10

- Hackenbroch, Wolfgang Bands of invariantly extendable measures. **91d:28009**  
 Labuda, Ivo "Scottish book" and its problem 24 on additive functionals. **91e:22004**  
 Rao, M. M. Bimeasures and harmonizable processes (analysis, classification, and representation). **91a:60134**  
 Tanaka, Jun-ichi Blaschke cocycles and generators. **91f:22006**  
 Tsarpes, N. A. A note on quasi  $R^*$ -invariant measures on semigroups. **91i:43001**

### 28C15 Set functions and measures on topological spaces (regularity of measures, etc.)

- Antonets, M. A. (with Tsvetkov, A. A.) Algebras of random variables and their representations. **91a:28010**  
 Camacho, James, Jr. Extensions of lattice regular measures with applications. **91i:28010**  
 Gryllakis, C. (with Koumoullis, G.) Completion regularity and  $\tau$ -additivity of measures on product spaces. **91k:28017**  
 Kahane, Jean-Pierre (with Katznelson, Yitzhak) Décomposition des mesures selon la dimension. [Decomposition of measures according to dimension] **91g:28018**  
 Katznelson, Yitzhak *see* Kahane, Jean-Pierre, **91g:28018**  
 Keller, Hans A. Measures on infinite-dimensional orthomodular spaces. **91g:28019**  
 Klimkin, V. M. Uniform boundedness of a family of regular  $f$ -composition set functions. (Russian) *see* **91g:60003**  
 Koumoullis, G. *see* Gryllakis, C., **91k:28017**  
 Sapounakis, A. Properties of measures on totally ordered spaces. **91g:28020**  
 Sristela, M. G. An analogue of Dieudonné's theorem for a normal space in generalized measure theory. (Russian) *see* **91g:60003**

- Tsvetkov, A. A. *see* Antonets, M. A., **91a:28010**  
 Yallaoui, el-Bachir Induced measures on Wallman spaces. **91j:28011**

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- Anichini, Giuseppe Approximate selections for nonconvex set valued mappings. (Italian summary) **91i:54016**  
 Chentsov, A. G. *see* Pashaev, A. B., **91b:28006**  
 Di Bari, Cristina Maria Measurability and countable separation. **91g:54025**  
 Klimkin, V. M. Uniform boundedness of a family of weakly regular nonadditive set functions. (Russian) **91d:28006**  
 Kusnarev, A. G. (with Malyugin, S. A.) Product and projective limit of vector measures. (Russian) **91k:46043**  
 Macheras, N. D. On inductive limits of measure spaces and projective limits of  $L^p$ -spaces. **91f:46038**  
 Malyugin, S. A. *see* Kusnarev, A. G., **91k:46043**  
 de María, José L. (with Rodríguez-Salinas, Baltasar) Structure of measures on topological spaces. **91h:46085**  
 Mohapl, Jaroslav On weakly convergent nets in spaces of nonnegative measures. **91h:28007**  
 Pashaev, A. B. (with Chentsov, A. G.) Measurability and integrability of functions on the space of measures. (Russian. English and Azerbaijani summaries) **91b:28006**  
 Rodríguez-Salinas, Baltasar *see* de María, José L., **91h:46085**  
 Schief, Andreas An open mapping theorem for measures. **91c:46040**  
 — An open mapping theorem for marginals. **91f:46039**  
 Zanzotto, Pio Andrea On measure derivation in metric spaces. **91e:28002**

### 28C20 Set functions and measures and integrals in infinite-dimensional spaces (Wiener measure, Gaussian measure, etc.) [see also 46G12, 58C35, 58D20, 60B11]

- Koval'chik, Yu. I. Cameron-Vladimirov formulas for Feynman integrals. (Russian) **91f:28006**  
 Pantsulaya, G. R. Invariant and quasi-invariant measures in some function spaces. (Russian. English and Georgian summaries) **91d:28028**  
 Yan, Jia An Generalizations of Gross' and Minlos' theorems. **91e:28011**
- Items with secondary classifications in 28C20
- Alexander-Katz, Roberto (with Rodríguez Talavera, Rogelio) On a Wiener integral for an exact Kratky-Porod end to end distance. (Spanish summary) **91d:82046**  
 de Bivar-Weinholtz, António (with Lapidus, Michel L.) Product formula for resolvents of normal operators and the modified Feynman integral. **91f:47052**  
 Bogachev, V. I. Differential properties of measures on infinite-dimensional spaces and the Malliavin calculus. **91m:58020**  
 — (with Smolyanov, O. G.) Analytic properties of infinite-dimensional distributions. **91m:60099**  
 Chung, Dong Myung (with Kang, Soon Ja) Evaluation of some conditional abstract Wiener integrals. **91f:46062**  
 — Conditional analytic Feynman integrals on abstract Wiener spaces. **91i:46050**  
 Fang, Shi Zan Pseudo-théorème de Sard pour les applications réelles et connexité sur l'espace de Wiener. (English summary) [Sard's pseudtheorem for real mappings and connectedness in Wiener space] **91a:58035**  
 Gaveau, Bernard (with Schulman, Lawrence S.) Charged polymer in an electric field. **91k:82034**  
 Heinrich, Stefan Invertibility of random Fredholm operators. **91d:47027**  
 (Hu, Y. Z.) *see* Johnson, Gerald W., **91d:60184**  
 Johnson, Gerald W. (with Kallianpur, G.) Some remarks on Y. Z. Hu and P.-A. Meyer's paper and infinite-dimensional calculus on finitely additive canonical Hilbert space: "Wiener chaos and the Feynman integral" [in *Séminaire de Probabilités, XXII*, 51–71, Lectures Notes in Math., 1321, Springer, Berlin, 1988; MR 89m:60193]. **91d:60184**  
 Kallianpur, G. *see* Johnson, Gerald W., **91d:60184**  
 Kang, Soon Ja *see* Chung, Dong Myung, **91f:46062**  
 Khafizov, M. U. The differentiability space of a product measure. **91a:46040**  
 Koldobskii, A. L. Inverse problem for potentials of measures in a Hilbert space. (Russian) **91e:46055**  
 Koval'chik, I. M. (with Yanovich, L. A.) ★ Обобщенный ви́нерский интеграл и некоторые его приложения. (Russian) [The generalized Wiener integral and some of its applications] **91h:46039**  
 — Radon-Nikodým derivatives of non-Fredholm linear transformations in a space of continuous functions in several variables. (Russian) **91h:46044**  
 Lapidus, Michel L. *see* de Bivar-Weinholtz, António, **91f:47052**  
 Lobanov, Yu. Yu. (with Shakhbagan, R. R.; Sidorova, O. V.; Zhidkov, E. P.) Computation of conditional Wiener integrals by the composite approximation formulas with weight. **91j:65045**  
 de María, José L. (with Rodríguez-Salinas, Baltasar) Structure of measures on topological spaces. **91h:46085**  
 (Meyer, Paul-André) *see* Johnson, Gerald W., **91d:60184**  
 Nualart, David (with Üstünel, Ali Süleyman; Zakai, Moshe) Some relations among classes of  $\sigma$ -fields on Wiener space. **91i:60147**  
 Okazaki, Yoshiaki (with Takahashi, Yasuji) The structure of the quasi-invariant set of a linear measure. **91m:28017**  
 Papell, Lech S. Remarks on functional integral representations of quantum evolutions for systems with electromagnetic fields. **91f:81084**  
 Park, Chull (with Skoug, David; Smolowitz, Lawrence) Fundamental theorem of Wiener calculus. **91i:46048**  
 Paycha, Sylvie Bosonic strings and measures on infinite-dimensional manifolds. **91m:81221**  
 Rainwater, John A class of null sets associated with convex functions on Banach spaces. **91j:46050**  
 Rias, E. A. Measures that coincide on balls. (Russian) **91m:60020**  
 Rodríguez-Salinas, Baltasar *see* de María, José L., **91h:46085**  
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- Romanov, V. A. The structure of sets of directions of continuity of product measures and of series of such in a Hilbert space. (Russian) 91h:46086
- Schulman, Lawrence S. *see* Gershan, Bernard, 91h:82034
- Shakhbargan, R. R. *see* Lobanov, Yu. Yu.; et al., 91j:65045
- Sidorova, O. V. *see* Lobanov, Yu. Yu.; et al., 91j:65045
- Skoug, David *see* Park, Chul; et al., 91h:46048
- Smolowitz, Lawrence *see* Park, Chul; et al., 91h:46048
- Smolyanov, O. G. *see* Bogachev, V. I., 91m:60099
- Song, Hi Ja. Gaussian measures on Lorentz sequence spaces. 91h:46041
- Gaussian measures on rearrangement invariant function spaces on  $[0, 1]$  and on separable  $\sigma$ -complete Banach lattices. 91h:46042
- Takahashi, Yasuji *see* Okazaki, Yoshiaki, 91m:28017
- Üstünel, Ali Süleyman *see* Nualart, David; et al., 91h:60147
- Yakhlakov, V. Yu. Surface measures on surfaces of finite codimension in a Banach space. 91d:46049
- Yanovich, L. A. *see* Koval'chik, I. M., 91h:46039
- Yokoi, Yoshitaka. Positive generalized white noise functionals. 91m:60075
- Żak, Tomasz. On the difference of Gaussian measure of two balls in Hilbert spaces. 91c:60010
- Zakai, Moshe *see* Nualart, David; et al., 91h:60147
- Zhdikov, E. P. *see* Lobanov, Yu. Yu.; et al., 91j:65045

## 28Dxx Measure-theoretic ergodic theory [see also 11K50, 11K55, 22D40, 47A35, 54H20, 58Fxx, 60Fxx, 60G10]

Harrison, Jenny C. An introduction to fractals. (see 91a:58130)

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- Kolmogorov, A. N. *see* Sinai, Ya. G., 91e:01017
- Sinai, Ya. G. Kolmogorov's work on ergodic theory. 91e:01017

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- Aaronsen, Jon (with Denker, Manfred). Lower bounds for partial sums of certain positive stationary processes. 91c:28012
- (with Denker, Manfred). Upper bounds for ergodic sums of infinite measure preserving transformations. 91h:28018
- Alpern, S. (with Prasad, V. S.). Coding a stationary process to one with prescribed marginals. 91f:28007
- Andersen, Kenneth F. On the weighted integrability of maximal ergodic ratios. 91a:28011
- Ashley, Jonathan. Marker automorphisms of the one-sided  $d$ -shift. 91h:28019
- Baggett, Lawrence W. (with Merrill, Kathy). On the cohomological equivalence of a class of functions under an irrational rotation of bounded type. 91f:28008
- Bellow, Alexandra. Perturbation of a sequence. 91f:28009
- (with Jones, Roger L.; Rosenblatt, Joseph). Convergence for moving averages. 91g:28021
- Bergelson, Vitaly. Independence properties of continuous flows. 91h:28020
- Binkowska, M. An example of a weak Bernoulli process which is not finitary. 91h:28014
- Bourgain, J. Double recurrence and almost sure convergence. 91d:28029
- Boyarsky, A. *see* Góra, Paweł, 91h:28021
- Chauve, P. (with Nadkarni, M. G.). On orbit equivalence of Borel automorphisms. 91a:28012
- Cowen, Robert Julian. Topological and measure-theoretic conjugacy of subshifts using the Ruelle operator. 91j:28012
- Denker, Manfred *see* Aaronsen, Jon, 91c:28012 and 91h:28018
- Eigen, Stanley J. (with Silva, Cesar E.). A structure theorem for  $n$ -to-1 endomorphisms and existence of nonrecurrent measures. 91c:28013
- Fedorov, A. L. *see* Gurvich, E. I., 91d:28031
- Fieldsteel, Adam (with Rudolph, Daniel J.). Stability of  $m$ -equivalence to the weak Pinsker property. 91f:28010
- Friedman, Nathaniel A. Partial mixing, partial rigidity, and factors. 91c:28015
- Furstenberg, Hillel. Nonconventional ergodic averages. 91h:28011
- Goodson, G. R. (with Lemańczyk, M.). On the rank of a class of bijective substitutions. 91h:28015
- Góra, Paweł (with Boyarsky, A.). Compactness of invariant densities for families of expanding, piecewise monotonic transformations. 91h:28021
- Guimier, Françoise. Simplicité du spectre de Liapounoff d'un produit de matrices aléatoires sur un corps ultramétrique. (English summary) [Simplicity of the Lyapunov spectrum of a product of random matrices over an ultrametric field] 91d:28030
- Gurvich, E. I. (with Fedorov, A. L.). Pairs of trajectory partitions, that are generated by endomorphisms. (Russian) 91d:28031
- Haase, Hermann. Measures on self-similar sets. 91c:28016
- Host, B. (with Parreau, François). Homomorphismes entre systèmes dynamiques définis par substitutions. [Homomorphisms between dynamical systems defined by substitutions] 91g:28022
- Iwanik, Anselm. A property of doubly stochastic densities. 91d:28032
- Jones, Roger L. *see* Bellow, Alexandra; et al., 91g:28021
- Kammeyer, Janet Whalen. A complete classification of the two-point extensions of a multidimensional Bernoulli shift. 91m:28018
- Keller, Gerhard. Lifting measures to Markov extensions. 91h:28011
- On the clustering conjecture for Bernoulli factors of Bernoulli shifts. 91d:28033
- Krengel, Ulrich. Generalized measure preserving transformations. 91h:28012
- Lambert, Alan. An operator theoretic characterization of isomorphism for measure preserving transformations. 91d:28034
- A bi-measurable transformation generated by a non-measure preserving transformation. 91g:28023
- Lamprea, J. P. (with Rica da Silva, A.; Sousa Ramos, J.).  $\otimes$ -product of Markov matrices. 91h:28013

- Lemańczyk, M. *see* Goodson, G. R., 91h:28015
- Lesigne, Emmanuel. Un théorème de disjonction de systèmes dynamiques et une généralisation du théorème ergodique de Wiener-Wintner. (English summary) [A disjointness theorem for dynamical systems, and a generalization of the Wiener-Wintner ergodic theorem] 91h:28016
- Martín-Reyes, F. J. (with de la Torre, Alberto). On the almost everywhere convergence of the ergodic averages. 91j:28013
- Merrill, Kathy *see* Baggett, Lawrence W., 91f:28008
- Nadkarni, M. G. *see* Chauve, P., 91a:28012
- Nogueira, Arnaldo. Almost all interval exchange transformations with flips are nonergodic. 91d:28035
- Parreau, François *see* Host, B., 91g:28022
- Pask, D. A. Skew products over the irrational rotation. 91d:28036
- Pellegrinotti, A. Errata: "Evidence for the Poisson distribution for quasi-energies in the quantum kicked-rotator model" [J. Statist. Phys. 53 (1988), no. 5-6, 1327-1336]. 91d:28037
- Prasad, V. S. *see* Alpern, S., 91f:28007
- Rauzy, G. Sequences defined by iterated morphisms. 91d:28038
- Rica da Silva, A. *see* Lamprea, J. P.; et al., 91h:28013
- Rosenblatt, Joseph *see* Bellow, Alexandra; et al., 91g:28021
- Roth, Jean-Pierre. Théorèmes de convergence presque-partout. (English summary) [Theorems of almost-everywhere convergence] 91h:28022
- Rudolph, Daniel J. (with Silva, Cesar E.). Minimal self-joinings for nonsingular transformations. 91c:28017
- *see also* Fieldsteel, Adam, 91f:28010
- Schräger, K. Almost superadditive ergodic theorems in the multiparameter case. 91c:28018
- Silva, Cesar E. *see* Rudolph, Daniel J., 91c:28017 and Eigen, Stanley J., 91c:28013
- Sousa Ramos, J. *see* Lamprea, J. P.; et al., 91h:28013
- Szlenk, Wiesław. Permutation of terms in the Birkhoff ergodic theorem. 91m:28019
- de la Torre, Alberto *see* Martín-Reyes, F. J., 91h:28013
- Totoki, Haruo (with Tsujii, Yoshiaki). Exactness and Bernoulliness of generalized random dynamical systems. 91g:28024
- Tsujii, Yoshiaki *see* Totoki, Haruo, 91g:28024
- Tuncel, Selim. Subsystems, Perron numbers, and continuous homomorphisms of Bernoulli shifts. 91a:28013
- de Vries, Jan. Invariant measures in abstract topological dynamics. 91d:28039
- Wagoner, J. B. Triangle identities and symmetries of a subshift of finite type. 91h:28017
- Weber, Michel Jean Georges. Une version fonctionnelle du théorème ergodique ponctuel. (English summary) [A functional version of the pointwise ergodic theorem] 91c:28014
- Zhang, Jian He. On weak mixing. (Chinese. English summary) 91h:28018
- Zimakov, N. P. The ergodic principle for a mapping of metric spaces. (Russian) (see 91h:00030)

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- Bandt, Christoph. Self-similar sets. IV. Topology and measures. 91m:58051
- Self-similar sets. III. Constructions with sofic systems. 91m:58050
- Barnsley, Michael F. (with Demko, Stephen; Elton, John H.; Geronimo, Jeffrey S.). Erratum: "Invariant measures for Markov processes arising from iterated function systems with place-dependent probabilities" [Ann. Inst. H. Poincaré Probab. Statist. 24 (1988), no. 3, 367-394; MR 89k:60088]. 91h:60054
- Beck, Christian. Brownian motion from deterministic dynamics. 91m:82099
- Bellow, Alexandra (with Jones, Roger L.; Rosenblatt, Joseph). Almost everywhere convergence of powers. 91c:47013
- (with Jones, Roger L.; Rosenblatt, Joseph). Harmonic analysis and ergodic theory. 91g:47006
- Benedicks, Michael (with Misiurewicz, Michał). Absolutely continuous invariant measures for maps with flat tops. 91h:58121
- Blanchard, F. Codes engendrant certains systèmes sofiques. (English summary) [Codes generating certain sofic systems] 91c:68067
- (with Hansel, G.). Sofic constant-to-one extensions of subshifts of finite type. 91m:54050
- Boyarsky, A. Discontinuity of physical measures. 91c:58092
- *see also* Góra, Paweł, 91h:58065
- Bradley, R. E. Pseudospectral operators and the pointwise ergodic theorem. 91h:47016
- Brogini Bratti, Adriana. An extension to normed lattices of a dichotomic theorem of Okazaki. (Italian. English summary) 91c:28011
- Choksi, J. R. (with Eigen, Stanley J.; Prasad, V. S.). Ergodic theory on homogeneous measure algebras revisited. 91c:28019
- Das, Gokulananda (with Patel, B. K.). Sublinear functionals ergodicity and finite invariant measures. 91a:47009
- Dateyama, Masahito. Homeomorphisms with Markov partitions. 91h:58107
- Davidowicz, Antoni Leon. On the positivity of an invariant measure on open nonempty sets. 91c:58093
- Demko, Stephen *see* Barnsley, Michael F.; et al., 91h:60054
- Devaney, Robert L.  $\odot$  Transition to chaos. 91m:58098
- Dumont, J.-M. Summation formulae for substitutions on a finite alphabet. 91g:11088
- Eigen, Stanley J. *see* Choksi, J. R.; et al., 91c:28019
- Elton, John H. *see* Barnsley, Michael F.; et al., 91h:60054
- Epremidze, L. N. On the majorant of ergodic means. 91h:28019
- Fedorov, V. V. *see* Sharkovskii, A. N.; et al., 91h:58065
- Gallardo Gómez, Diego. Weighted integral inequalities for the ergodic maximal operator and other sublinear operators. Convergence of the averages and the ergodic Hilbert transform. 91g:47007
- Galves, Antonio (with Schmitt, Bruno V.). Occurrence times of rare events for mixing dynamical systems. (French summary) 91m:58091
- Geronimo, Jeffrey S. *see* Barnsley, Michael F.; et al., 91h:60054
- Góra, Paweł (with Boyarsky, A.). The Frobenius-Perron operator on spaces of curves. 91h:58065
- Guilloit, Laurent. Mesures invariantes sur des ensembles autosimilaires. [Invariant measures on self-similar sets] 91h:60071

- Gurevich, B. M. (with Zargaryan, A. S.) Conditions for the existence of a maximal measure for a countable symbolic Markov chain. (Russian) **91b:58122**
- Hansel, G. (with Perrin, Dominique) Rational probability measures. **91c:68070**  
— see also Blanchard, F., 91m:54050
- Hawkins, Jane M. Properties of ergodic flows associated to product odometers. **91c:46081** (Isola, Stefano) see Ruelle, David, 91d:58169
- Jones, Roger L. see Bellow, Alexandra; et al., 91c:47013 and 91g:47006
- Kammeyer, Janet Whalen The isomorphism theorem for relatively finitely determined  $\mathbb{Z}^n$ -actions. **91g:28025**
- Kolyada, S. F. see Sharkovskii, A. N.; et al., 91k:58065
- Komornik, József Asymptotic periodicity of the iterates of Markov operators. (see 91j:40003)
- Lax, Peter D. The ergodic character of sequences of pedal triangles. **91b:51028**
- Lesigne, Emmanuel (with Petersen, Karl) Bounded exponential sums. **91k:47017**
- McConnell, Terry R. (with Rieders, Eric) The two-parameter strong law for partially exchangeable arrays. **91d:60077**
- Misiurewicz, Michał see Benedicks, Michael, 91b:58121
- Mori, Makoto Fredholm determinant for piecewise linear transformations. **91k:58069**
- Murita, Takehiko A generalized local limit theorem for Lasota-Yorke transformations. **91a:58176**
- Nieva, A. On the statistical behavior of the orbits elements of the logistic equation  $4x(1-x)$ . (Spanish summary) **91c:58096**
- Ornstein, Donald S. (with Weiss, Benjamin) How sampling reveals a process. **91b:60041**
- Patel, B. K. see Das, Gokulananda, 91a:47009
- Perrin, Dominique see Hansel, G., 91c:68070
- Petersen, Karl Almost everywhere convergence of some nonhomogeneous averages. **91c:47007**  
— see also Lesigne, Emmanuel, 91k:47017
- von Plato, Jan Probability in dynamical systems. **91a:60005**
- Podhorodyski, Marian Stability and exactness. **91g:47008**
- Prasad, V. S. see Choksi, J. R.; et al., 91c:28019
- Rieders, Eric see McConnell, Terry R., 91d:60077
- Rosenblatt, Joseph see Bellow, Alexandra; et al., 91c:47013 and 91g:47006
- Ruelle, David  $\star$  Chaotic evolution and strange attractors. **91d:58169**
- Schmitt, Bruno V. see Galves, Antonio, 91m:58091
- Sharkovskii, A. N. (with Kolyada, S. F.; Sivak, A. G.; Fedorenko, V. V.)  $\star$  Динамика одномерных отображений. (Russian) [Dynamics of one-dimensional mappings] **91k:58065**
- Shimomura, Hiroaki Remark to the ergodic decomposition of measures. **91k:28006**
- Shipovskii, A. N. A local ergodic theorem in symmetric spaces. (Russian) (see 91b:00030)
- Sivak, A. G. see Sharkovskii, A. N.; et al., 91k:58065
- Trubetskiy, Sergei E. A comparison of elastic and inelastic billiards. **91g:58162**
- Taniguchi, Yoshiki Generalized random ergodic theorems and Hausdorff-measures of random fractals. **91b:58127**
- Urbanik, Mariusz Hausdorff dimension of invariant subsets for endomorphisms of the circle with an indifferent fixed point. **91a:58106**
- Warstat, Volker A cluster property of systems of interacting polymers. **91d:82047**
- Weiss, Benjamin see Ornstein, Donald S., 91b:60041
- Williams, Susan Notes on renewal systems. **91d:54047**
- Yu, Shu Xiang Unique ergodicity of dynamical systems on a torus. (Chinese) **91b:58129**
- Zargaryan, A. S. see Gurevich, B. M., 91b:58122
- 28D10 One-parameter continuous families of measure-preserving transformations**
- Épimide, L. N. On the majorant of ergodic means. **91b:28019**
- Krutina, Miroslav A note on the relation between asymptotic rates of a flow under a function and its basis-automorphism. **91d:28040**
- Items with secondary classifications in 28D10
- Balogh, Zoltán (with Bennett, Harold R.; Martin, Clyde Franklin) On the observability of ergodic flows on abelian groups with characteristic functions. **91a:58100**
- Bennett, Harold R. see Balogh, Zoltán; et al., 91a:58100
- (Fried, David) see Ornstein, Donald S., 91g:58160
- Martin, Clyde Franklin see Balogh, Zoltán; et al., 91a:58100
- Ornstein, Donald S. (with Weiss, Benjamin) How sampling reveals a process. **91b:60041**  
— (with Weiss, Benjamin) Statistical properties of chaotic systems. **91g:58160**
- Weiss, Benjamin see Ornstein, Donald S., 91g:58160 and 91b:60041
- Yakobson, M. V. Universal behavior and stochasticity for one-dimensional systems. (see 91j:60003)
- 28D15 General groups of measure-preserving transformations**
- Adams, Scott Trees and amenable equivalence relations. **91d:28041**
- Choksi, J. R. (with Eigen, Stanley J.; Prasad, V. S.) Ergodic theory on homogeneous measure algebras revisited. **91c:28019**
- Datayama, Masahito The almost weak specification property for ergodic group automorphisms of abelian groups. **91b:28014**
- Eigen, Stanley J. see Choksi, J. R.; et al., 91c:28019
- Feldman, Jacob (with Sutherland, C. E.; Zimmer, Robert J.) Subrelations of ergodic equivalence relations. **91c:28020**
- Golodets, V. Ya. (with Sokhet, A. M.) Ergodic actions of abelian groups with a discrete spectrum, and approximate transitivity. **91b:28015**
- Laczkovich, M. Invariant signed measures and the cancellation law. **91k:28012**
- Martin-Reyes, F. J. On a pointwise ergodic theorem for multiparameter groups. **91d:28042**
- Prasad, V. S. see Choksi, J. R.; et al., 91c:28019
- Rudolph, Daniel J. Markov tilings of  $\mathbb{R}^n$  and representations of  $\mathbb{R}^n$  actions. **91b:28016**
- Shortt, Rae Michael Groups of measurable automorphisms for spaces of finite type. **91c:28015**
- Sokhet, A. M. see Golodets, V. Ya., 91b:28015
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- Items with secondary classifications in 28D15
- Bunce, L. J. (with Wright, J. D. Maitland) On Sullivan's invariant measure problem. **91c:46068**
- Bunimovich, L. A. (with Kornfeld, I. P.; Dobrushin, R. L.; Yakobson, M. V.; Maslova, N. B.; Pesin, Ya. B.; Sinai, Ya. G.; Sukhov, Yu. M.; Vershik, A. M.)  $\star$  Dynamical systems. II. **91i:58079**
- Dobrushin, R. L. see Bunimovich, L. A.; et al., 91i:58079
- Fedorov, A. L. see Gurvich, E. I., 91d:28031
- Gurvich, E. I. (with Fedorov, A. L.) Pairs of trajectory partitions, that are generated by endomorphisms. (Russian) **91d:28031**
- Häfler-Richter, Karin Über den Zusammenhang von Punkt- und Mengenkonfigurationsräumen über dem Gitter  $\mathbb{Z}^d$ . [On the connection of point and set configuration spaces over the lattice  $\mathbb{Z}^d$ ] **91j:82004**
- Hawkins, Jane M. Diffeomorphisms of manifolds with nonsingular Poincaré flows. **91b:58123**
- Hurley, Mike Varieties of periodic attractor in cellular automata. **91k:58063**
- Iozzi, Alessandra Algebraic hulls and smooth orbit equivalence. **91j:22003**
- Kamiński, Brunon An axiomatic definition of the entropy of a  $\mathbb{Z}^d$ -action on a Lebesgue space. **91d:28043**
- Kornfeld, I. P. see Bunimovich, L. A.; et al., 91i:58079
- Margulis, G. A. Lie groups and ergodic theory. **91a:22009**
- Maslova, N. B. see Bunimovich, L. A.; et al., 91i:58079
- Mathiszi, Bernd Zetafunktionen für  $\mathbb{Z}^d$ -Subshifts endlichen Typs. [Zeta functions for  $\mathbb{Z}^d$ -subshifts of finite type] **91g:58221**
- Pesin, Ya. B. see Bunimovich, L. A.; et al., 91i:58079
- Shimomura, Takashi On a structure of discrete dynamical systems from the viewpoint of chain components and some applications. **91d:54020**
- Sinai, Ya. G. see Bunimovich, L. A.; et al., 91i:58079
- Szarek, Mark R. Markov partitions for the two-dimensional torus. **91m:58122**
- Starkov, A. N. The structure of orbits of homogeneous flows and the Raghunathan conjecture. **91i:22017**
- Sukhov, Yu. M. see Bunimovich, L. A.; et al., 91i:58079
- Tuncel, Selim Subsystems, Perron numbers, and continuous homomorphisms of Bernoulli shifts. **91a:28013**
- Vershik, A. M. see Bunimovich, L. A.; et al., 91i:58079
- Wright, J. D. Maitland see Bunce, L. J., 91c:46068
- Yakobson, M. V. see Bunimovich, L. A.; et al., 91i:58079
- 28D20 Entropy and other invariants**
- Janković, Slobodan Ergodic decomposition of entropy. (Serbo-Croatian summary) **91c:28016**
- del Junco, Andrés Bernoulli shifts of the same entropy are finitarily and unilaterally isomorphic. **91m:28020**
- Kachurovskii, A. G. A metric invariant of entropy type. (Russian) **91c:28021**
- Kamiński, Brunon An axiomatic definition of the entropy of a  $\mathbb{Z}^d$ -action on a Lebesgue space. **91d:28043**
- Kammeyer, Janet Whalen The isomorphism theorem for relatively finitely determined  $\mathbb{Z}^n$ -actions. **91g:28025**
- Karanikas, C. (with Koumandos, S.) On a generalized entropy formula. **91j:28014**
- Koumandos, S. see Karanikas, C., 91j:28014
- Krutina, Miroslav A nonergodic version of Rudolph's theorem. **91m:28021**
- Marcus, Brian (with Tuncel, Selim) Entropy at a weight-per-symbol and embeddings of Markov chains. **91k:28023**
- Nadkarni, M. G. (with Robertson, James B.) Spectral radius of nonsingular transformations. **91m:28022**
- Robertson, James B. see Nadkarni, M. G., 91m:28022
- Rudolph, Daniel J.  $\times 2$  and  $\times 3$  invariant measures and entropy. **91g:28026**
- Schmidt, Klaus D. Automorphisms of compact abelian groups and affine varieties. **91j:28015**
- Shcherbina, N. V. Entropy of the space of  $C^2$ -smooth curves in the Hausdorff metric. **91b:28017**
- Tuncel, Selim see Marcus, Brian, 91k:28023
- Items with secondary classifications in 28D20
- Abundo, Mario An almost sure invariance principle for the maps  $S_n(x) = ax(1-x)$  in the interval  $[0, 1]$ . **91f:58049**
- Alzawa, Yōji Nonstationary chaos revisited from large deviation theory. **91k:82038**
- Auslander, J. (with Berg, K.) A condition for zero entropy. **91d:54045**
- Berg, K. see Auslander, J., 91d:54045
- Boyle, Mike (with Franks, John; Kitchens, Bruce) Automorphisms of one-sided subshifts of finite type. **91b:58037**
- Chen, Rui Xiong Determination of topological entropies of one-dimensional maps by the method of inverse orbit analysis. (Chinese. English summary) **91c:58055**
- Coelho, Zaquen (with Parry, William) Central limit asymptotics for shifts of finite type. **91f:60065**
- Fedorenko, V. V. (with Sharkovskii, A. N.; Smítal, Jaroslav) Characterizations of weakly chaotic maps of the interval. **91a:58148**
- Ferber, Reginald Iteration on sets of configurations. **91m:68134**
- Franks, John see Boyle, Mike; et al., 91b:58037
- Franzová, N. (with Smítal, Jaroslav) Positive sequence topological entropy characterizes chaotic maps. **91j:58107**
- Friedman, Nathaniel A. Partial mixing, partial rigidity, and factors. **91c:28015**
- Góra, Paweł Differential entropy: continuity properties and applications to nonsingular endomorphisms. **91m:46037**
- Hudetz, Thomas Algebraic topological entropy. **91m:46105**

- Kammeyer, Janet Whalen A complete classification of the two-point extensions of a multidimensional Bernoulli shift. 91m:28018
- Kifer, Yuri Large deviations in dynamical systems and stochastic processes. 91e:60091
- Kim, Ki Hang (with Roush, Fred W.) Solution of two conjectures in symbolic dynamics. 91j:58053
- Kitchens, Bruce see Boyle, Mike; et al., 91h:58037
- Krutina, Miroslav A note on the relation between asymptotic rates of a flow under a function and its basis-automorphism. 91d:28040
- Li, Tien-Yien Entropy. (Chinese. English summary) 91k:00002
- Lopes, Artur O. An analogy of the charge distribution on Julia sets with the Brownian motion. 91a:58141
- Mendes France, Michel Chaos implies confusion. 91c:52002
- Parry, William see Coelho, Zaqueu, 91f:60065
- Robert, Raoul Concentration et entropie pour les mesures d'Young. (English summary) [Concentration and entropy for Young measures] 91c:94013
- Roush, Fred W. see Kim, Ki Hang, 91j:58053
- Sharkovskii, A. N. see Fedorenko, V. V.; et al., 91a:58148
- Smítal, Jaroslav see Fedorenko, V. V.; et al., 91a:58148 and Franzová, N., 91j:58107
- Trow, Paul Degrees of finite-to-one factor maps. 91m:58052
- Walczak, Paweł G. On the geodesic flow of a foliation of a compact manifold of negative constant curvature. 91a:58146
- Ziemian, Krystyna Rate of convergence of conditional entropies for some maps of an interval. 91j:58094a
- Refinement of the Shannon-McMillan-Breiman theorem for some maps of an interval. 91j:58094b

## 28D99 None of the above, but in this section

- Alpern, S. (with Prasad, V. S.) Return times for nonsingular measurable transformations. 91m:28023
- Dajani, Karim Genericity of nontrivial  $H$ -superrecurrent  $H$ -cocycles. 91c:28022
- Prasad, V. S. see Alpern, S., 91m:28023
- Sato, Ryotaro An ergodic theorem without invariant measure. 91m:28024
- Silva, Cesar E. Truncated ergodic theorems for nonsingular automorphisms. 91f:28011
- Items with secondary classifications in 28D99
- Adams, Scott (with Spatzier, R. J.) Kazhdan groups, cocycles and trees. 91c:22011
- Aassani, I. Rota's alternating procedure with nonpositive operators. 91b:47019
- Bezuglyi, S. I. (with Golodets, V. Ya.) Type III<sub>0</sub> transformations of measure space and outer conjugacy of countable amenable groups of automorphisms. 91c:46091
- Elton, John H. A multiplicative ergodic theorem for Lipschitz maps. 91a:47010
- Gefter, S. L. (with Golodets, V. Ya.) Fundamental groups for ergodic actions and actions with unit fundamental groups. 91c:46090
- Golodets, V. Ya. see Bezuglyi, S. I., 91c:46091 and Gefter, S. L., 91c:46090
- Keller, Gerhard Markov extensions, zeta functions, and Fredholm theory for piecewise invertible dynamical systems. 91c:58062
- Kim, Ki Hang (with Roush, Fred W.) Decidability of epimorphisms of dimension groups and certain modules. 91f:03092
- Roth, Jean-Pierre Reformulation et extension de certains théorèmes ergodiques. (English summary) [Reformulation and extension of some ergodic theorems] 91b:47012
- Roush, Fred W. see Kim, Ki Hang, 91f:03092
- Spatzier, R. J. see Adams, Scott, 91c:22011
- Zaharopol, Radu On products of conditional expectation operators. 91j:47007

## 28Exx Miscellaneous topics in measure theory

### 28E05 Nonstandard measure theory [see also 03H05, 26E35]

- Feneyrol-Perrin, Yvette Point de vue nonstandard sur l'intégrale de Lebesgue. [Nonstandard approach to the Lebesgue integral] 91k:28024
- Rašković, Miodrag Covering theorem for sequences of integers. (Serbo-Croatian summary) 91m:28025
- Items with secondary classifications in 28E05
- Arkeryd, Lef On the generation of measure valued solutions on  $\mathbb{R}^n$  from Loeb solutions on  $\mathbb{R}^n$  for the Boltzmann equation. 91c:82050
- Hoskins, Roy Frank ★ Standard and nonstandard analysis. 91g:26034
- Landers, Dieter (with Rogge, Lothar) Dominated and uniformly dominated families of Loeb-measures. 91f:03134
- Nelson, Edward What is stochastic mechanics? 91f:03136
- Rogge, Lothar see Landers, Dieter, 91f:03134
- Ross, David Andrew Lifting theorems in nonstandard measure theory. 91b:03110

### 28E10 Fuzzy measure theory [see also 04A72, 26E50, 94D05]

- Bán, J. Radon-Nikodým theorem and conditional expectation of fuzzy-valued measures and variables. 91d:28044
- de Campos Ibáñez, Luis Miguel (with Lamata, Maria T.; Moral, Serafin) Distances between fuzzy measures through associated probabilities: some applications. 91c:28017
- Chovanec, Ferdinand (with Kópka, František) Fuzzy equality and convergences for  $F$ -observable in  $F$ -quantum spaces. (Slovak summary) 91k:28025
- Kópka, František see Chovanec, Ferdinand, 91k:28025
- Lamata, Maria T. see de Campos Ibáñez, Luis Miguel; et al., 91c:28017
- Li, Ai Jie see Zhang, Wen Xiu; et al., 91g:28028
- Li, Teng see Zhang, Wen Xiu; et al., 91g:28028
- Ma, Ji Feng see Zhang, Wen Xiu; et al., 91g:28028
- Moral, Serafin see de Campos Ibáñez, Luis Miguel; et al., 91c:28017
- Nakajima, Nobuyuki Measurability, measures and probabilities in fuzzy set theory. 91c:28023

- Pap, Endre Lebesgue and Saks decompositions of  $\perp$ -decomposable measures. 91m:28026
- Qiao, Zhong On fuzzy measure and fuzzy integral on fuzzy set. 91c:28018
- Fuzzy integrals on  $L$ -fuzzy sets. 91h:28020
- see also Wang, Zhen Yuan, 91k:28026
- Rovenja, Eugen On the degree of fuzziness of a fuzzy set. 91g:28027
- Shostak, A. P. Fuzzy topologies on spaces of probability measures. (Russian) 91h:28021
- Skala, Heinz J. On fuzzy probability measures. 91h:28022
- Wang, Zhen Yuan Absolute continuity and extension of fuzzy measures. 91c:28019
- (with Qiao, Zhong) Transformation theorems for fuzzy integrals on fuzzy sets. 91k:28026
- Zhang, Wen Xiu (with Li, Teng; Ma, Ji Feng; Li, Ai Jie) Set-valued measure and fuzzy set-valued measure. 91g:28028

## Items with secondary classifications in 28E10

- Dubois, Didier (with Prade, Henri M.) Scalar evaluations of fuzzy sets: overview and applications. 91b:03092
- Kitaoka, Masatoshi see Zhao, Jun Ming, (Not in MR)
- Li, Shou Mei see Wang, Zhen Yuan, 91k:62006
- Mesiar, Radko (with Piasecki, Krzysztof) On a possible generalization of the Bayes method of inference. (Not in MR)
- Piasecki, Krzysztof see Mesiar, Radko, (Not in MR)
- Prade, Henri M. see Dubois, Didier, 91b:03092
- Qiao, Zhong On the extension of possibility measures. 91c:04001
- Wakker, Peter A behavioral foundation for fuzzy measures. 91k:04005
- Wang, Zhen Yuan (with Li, Shou Mei) Fuzzy linear regression analysis of fuzzy valued variables. 91i:62006
- Zhao, Jun Ming (with Kitaoka, Masatoshi) A comparison of quantification and fuzzy quantification theory. (Japanese) (Not in MR)

## 28E15 Other connections with logic and set theory

- Harrington, L. A. (with Kechris, A. S.; Louveau, Alain) A Glimm-Effros dichotomy for Borel equivalence relations. 91h:28023
- Kechris, A. S. see Harrington, L. A.; et al., 91h:28023
- Louveau, Alain see Harrington, L. A.; et al., 91h:28023

## Items with secondary classifications in 28E15

- Bridges, Douglas S. (with Demuth, Oswald) On the Lebesgue measurability of continuous functions in constructive analysis. 91b:03143
- Demuth, Oswald see Bridges, Douglas S., 91b:03143
- Khalifa, Azza Kamal A new approach to constructive topology and measure theory. 91i:03120
- Simpson, Stephen G. see Yu, Xiaokang, 91i:03112
- Yu, Xiaokang (with Simpson, Stephen G.) Measure theory and weak König's lemma. 91i:03112

## 28E99 None of the above, but in this section

### Items with secondary classifications in 28E99

- Lipovan, Octavian The probabilistic submeasurability of functions with values in products of statistic spaces. (Romanian summary) 91k:28001

## 30-XX Functions of a complex variable {For analysis on manifolds, see 58-XX.}

### 30-01 Instructional exposition (textbooks, tutorial papers, etc.)

- (Burckel, Robert B.) see Remmert, Reinhold, 91m:30001
- Delbeault, P. ★ Analyse complexe. (French) [Complex analysis] 91h:30001
- (Embarek, Djilali) see Shabat, B. V., 91b:30002
- Fisher, Stephen D. ★ Complex variables. 91b:30001
- Leborgne, Daniel ★ Calcul différentiel complexe. (French) [Complex differential calculus] (Not in MR)
- Ma, Ji Liang Some criteria for branch points of multivalued analytic functions. (Chinese. English summary) (Not in MR)
- Priestley, H. A. ★ Introduction to complex analysis. 91k:30001
- Remmert, Reinhold ★ Theory of complex functions. 91m:30001
- Shabat, B. V. ★ Introduction à l'analyse complexe. Tome 1. (French) [Introduction to complex analysis. Vol. 1] 91k:30002

### Items with secondary classifications in 30-01

- Bayen, François (with Margaria, Christian) ★ Problèmes de mathématiques appliquées. Tome 1. (French) [Applied mathematics problems. Vol. 1] 91b:00005
- Margaria, Christian see Bayen, François, 91b:00005

### 30-02 Research exposition (monographs, survey articles)

- Laurent'ev, M. A. (with Shabat, B. V.) ★ Методы теории функций комплексного переменного. (Russian) [Methods of the theory of functions in a complex variable] 91k:30003
- Shabat, B. V. see Laurent'ev, M. A., 91k:30003

### Items with secondary classifications in 30-02

- Akhiezer, N. I. ★ Elements of the theory of elliptic functions. 91k:33016



- Gehring, Frederick W. ★ Quasiconformal mappings. 91b:30062  
 Hayman, W. K. ★ Subharmonic functions. Vol. 2. 91f:31001  
 (McFaden, H. H.) see Ahlfors, L. V., 91b:33016  
 (Mouton, G. D.) see Gehring, Frederick W., 91b:30062  
 Niino, Kiyoshi see Ozawa, Mitsuru, 91f:30069  
 Ozawa, Mitsuru (with Niino, Kiyoshi) Surveys of analytic mappings between two Riemann surfaces. 91f:30069  
 Yang, Chung-chun<sup>1</sup> see Zhuang, Qi Tai, 91b:30072  
 Zhuang, Qi Tai (with Yang, Chung-chun<sup>1</sup>) ★ Fix-points and factorization of meromorphic functions. 91b:30072  
 Zorich, V. A. Bounded dependence on the dimension of certain important values in the theory of quasiconformal mappings in space. (Russian. Serbo-Croatian summary) 91a:30017

### 30-03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 30-03

- (Biermann, Kurt-Reinhard) see Weierstraß, Karl Theodor Wilhelm, 91f:01146  
 (Dedekind, Richard) see Riemann, Georg Friedrich Bernhard, 91j:01070a and 91j:01070b  
 (Narasimhan, Raghavan) see Riemann, Georg Friedrich Bernhard, 91j:01070a and 91j:01070b  
 Riemann, Georg Friedrich Bernhard ★ Gesammelte mathematische Werke, wissenschaftlicher Nachlass und Nachträge. (German) [Collected mathematical works, scientific Nachlass and addenda] 91j:01070a  
 — ★ Gesammelte mathematische Werke, wissenschaftlicher Nachlass und Nachträge. (German) [Collected mathematical works, scientific Nachlass and addenda] 91j:01070b  
 (Siegismund-Schultze, Reinhard) see Weierstraß, Karl Theodor Wilhelm, 91f:01146  
 Ullrich, Peter Weierstraß' Vorlesung zur "Einleitung in die Theorie der analytischen Funktionen". [Weierstraß' lectures on the "Introduction to the theory of analytic functions"] 91b:01056  
 (Weber, Heinrich) see Riemann, Georg Friedrich Bernhard, 91j:01070a and 91j:01070b  
 Weierstraß, Karl Theodor Wilhelm ★ Ausgewählte Kapitel aus der Funktionentheorie. (German) [Selected chapters from function theory] 91f:01146  
 — see also Ullrich, Peter, 91b:01056

Items listed otherwise than by author

Biography:

- Riemann, Georg Friedrich Bernhard see Riemann, Georg Friedrich Bernhard, 91j:01070a and 91j:01070b

Collected Works:

- Riemann, Georg Friedrich Bernhard see Riemann, Georg Friedrich Bernhard, 91j:01070a and 91j:01070b

### 30-04 Explicit machine computation and programs (not the theory of computation or programming)

Items with secondary classifications in 30-04

- Helton, J. William (with Spain, P. G.; Young, Nicholas J.) Tracking poles and representing Hankel operators directly from data. 91k:93040  
 Spain, P. G. see Helton, J. William; et al., 91k:93040  
 Young, Nicholas J. see Helton, J. William; et al., 91k:93040

### 30-06 Proceedings, conferences, collections, etc.

- (Lavrent'ev, M. M.) see All-Union Conference: Geometric Function Theory, 91a:30001  
 (Ruscheweyh, Stephan) see Computational methods and function theory, 91e:30001  
 (Saff, E. B.) see Computational methods and function theory, 91e:30001  
 (Salinas Carrasco, Luis) see Computational methods and function theory, 91e:30001  
 (Varga, Richard S.) see Computational methods and function theory, 91e:30001

Items listed otherwise than by author

All-Union Conference:

- Geometric Function Theory ★ Всесоюзная Конференция по Геометрической Теории Функций. (Russian) [All-Union Conference on Geometric Function Theory] 91a:30001

All-Union School:

- Theory of Functions ★ Всесоюзная Школа по Теории Функций. (Russian) [All-Union School on the Theory of Functions] 91b:30002

- Computational methods and function theory ★ Computational methods and function theory. 91e:30001

Conference:

- Computational Methods and Function Theory ★ Computational methods and function theory. 91e:30001

- Eggen ★ Всесоюзная Школа по Теории Функций. (Russian) [All-Union School on the Theory of Functions] 91b:30002

- Lecture Notes in Mathematics ★ Computational methods and function theory. 91e:30001

- Novosibirsk ★ Всесоюзная Конференция по Геометрической Теории Функций. (Russian) [All-Union Conference on Geometric Function Theory] 91a:30001

Symposium:

- Topics in Univalent Functions and its Applications ★ Topics in univalent functions and its applications. 91e:30002

- Topics in univalent functions and its applications ★ Topics in univalent functions and its applications. 91e:30002

- Valparaíso ★ Computational methods and function theory. 91e:30001

Items with secondary classifications in 30-06

- (Alfaro, Manuel) see Rational approximation and orthogonal polynomials, 91a:00024

- (Korneichuk, N. P.) see Problems in analysis and approximation, 91b:00035  
 (Nikol'skii, S. M.) see Theory of functions and approximations, 91j:00017

Items listed otherwise than by author

All-Union School:

- Theory of the Approximation of Functions ★ Всесоюзная Школа "Теория Приближения Функций". (Russian) [All-Union School "Theory of the Approximation of Functions"] 91a:41001

Colloquium:

- Rational Approximation and Orthogonal Polynomials ★ Rational approximation and orthogonal polynomials. 91a:00024

- Lutsk ★ Всесоюзная Школа "Теория Приближения Функций". (Russian) [All-Union School "Theory of the Approximation of Functions"] 91a:41001

- Problems in analysis and approximation ★ Вопросы анализа и приближения. (Russian) [Problems in analysis and approximation] 91b:00035

- Rational approximation and orthogonal polynomials ★ Rational approximation and orthogonal polynomials. 91a:00024

- Saratov ★ Теория функций и приближений. Часть 2. (Russian) [Theory of functions and approximations. Part 2] 91j:00017

School:

- Theory of Functions and Approximations ★ Теория функций и приближений. Часть 2. (Russian) [Theory of functions and approximations. Part 2] 91j:00017

- Theory of functions and approximations ★ Теория функций и приближений. Часть 2. (Russian) [Theory of functions and approximations. Part 2] 91j:00017

- Zaragoza ★ Rational approximation and orthogonal polynomials. 91a:00024

### 30Axx General properties

#### 30A05 Monogenic properties of complex functions (including polygenic and areolar monogenic functions)

- Atabev, M. A theorem on the removal of singularities of an analytic function. (Russian) 91c:30003  
 Rao, N. Venkateswara A generalization of the Looman-Menchoff theorem. 91k:30004  
 Shell-Small, T. On the Fourier series of a step function. 91b:30002  
 Volkov, V. V. Functions with zero integrals with respect to certain sets. (Russian. English summary) 91j:30001  
 Zeng, Yue Sheng A note on an integral operator on left- $k$ -monogenic functions. (Chinese. English summary) (Not in MR)

#### 30A10 Inequalities in the complex domain

- Mömm, Siegfried Lower bounds for the modulus of analytic functions. 91c:30001  
 Saffari, Bahman Extremal problems on polynomials. 91b:30003

Items with secondary classifications in 30A10

- Butcher, I. M. The A. A. Markov-S. N. Bernstein and S. M. Nikol'skii inequalities for algebraic polynomials in domains with a quasiconformal boundary. (Russian) 91b:30017  
 Golomb, Solomon W. see Zhang, Ning, (Not in MR)  
 Rahman, Qazi I. (with Ruscheweyh, Stephan) Markov's inequality for typically real polynomials. 91d:30007  
 Ruscheweyh, Stephan see Rahman, Qazi I., 91d:30007  
 Zhang, Ning (with Golomb, Solomon W.) Uniqueness of the generalized Barker sequence of length 6. (Not in MR)

### 30Bxx Series expansions

#### 30B10 Power series (including lacunary series)

- Adepoju, Jerome A. A Fabry-type gap theorem for Faber series. 91m:30002  
 Geluk, J. L. On conjugate  $\Pi$ -variation and the coefficients of power series. 91b:30001  
 Gethner, Robert M. Zeros of the successive derivatives of Hadamard gap series in the unit disk. 91b:30004  
 Kakichev, V. A. Matrix convolution of power series. (Russian) 91j:30002  
 Knopfmacher, Arnold (with Knopfmacher, John) A product representation for power series. 91b:30005  
 Knopfmacher, John see Knopfmacher, Arnold, 91b:30005  
 Levina, T. M. An equation with generalized shifts. (Russian) (see 91j:00017)  
 Matveeva, L. V. Characterization of summability domains. (Russian) (see 91j:00017)  
 Mavrod, N. N. Necessary and sufficient conditions for the superconvergence of power series. (Russian) 91b:30006  
 Müller, Jürgen<sup>3</sup> Über analytische Fortsetzung mit Matrixverfahren. [On analytic continuation with matrix methods] 91j:30003  
 Mural, Takafumi Gap series. 91j:30004  
 Nakmetov, V. A. The abscissa of convergence of a series in rational fractions. (Russian) 91b:30007  
 Riedel, Roland Konvergenzbeschleunigung von Potenzreihen mittels Euler-Bromwich-Transformation. I. [Accelerating the convergence of power series by means of the Euler-Bromwich transform. I] 91e:30004  
 Sheremeta, M. N. The growth of analytic functions. 91k:30005  
 Items with secondary classifications in 30B10  
 Bultheel, Adhemar ★ Laurent series and their Padé approximations. 91h:41001  
 Choudhury, Raouf Sur des développements de fonctions elliptiques. (English summary) [On the expansions of elliptic functions] 91g:33026

- Ishiguro, Kazuo (with Meyer-König, W.; Zeller, Karl) Die Turánische Matrix als Produkt einer Euler-Knopp- und einer Taylor-Matrix. (English summary) [Turán's matrix as product of an Euler-Knopp and a Taylor matrix] 91c:40004
- Krainova, L. I. Tauberian theorems for power series and Laplace integrals. (Russian. Tajiki summary) 91a:40007
- Lev-Ari, Hanoch Extension problems under the displacement structure regime. 91b:15028
- Meyer-König, W. see Ishiguro, Kazuo; et al., 91c:40004
- Reich, Ludwig Die Differentialgleichungen von Aczél-Jabotinsky, von Briot-Bouquet und maximale Familien konvergenter vertauschbarer Potenzreihen. [The differential equations of Aczél-Jabotinsky, of Briot-Bouquet and maximal families of convergent permutable power series] 91d:34010
- Zeller, Karl see Ishiguro, Kazuo; et al., 91c:40004

### 30B20 Random power series

- Items with secondary classifications in 30B20
- Cochran, W. George Random Blaschke products. 91c:30061
- Gutknecht, Martin H. Continued fractions associated with the Newton-Padé table. 91g:41018
- Yu, Jia Rong Random power series and exponential series. (Chinese. English summary) 91m:60095

### 30B30 Boundary behavior of power series, over-convergence

- Mavrodi, N. N. Overconvergence of power series and complete regularity of the growth of a function on a ray. (Russian) 91j:30005
- Sons, L. R. On singular radii. 91d:30001

Items with secondary classifications in 30B30

- Zerouali, Elhassan Estimates for inverses of  $e^{int}$  in some quotient algebras of  $A^+$ . 91j:42006

### 30B40 Analytic continuation

- Kovacheva, Ralitzka K. Diagonal rational Chebyshev approximants and holomorphic continuation of functions. 91j:30002
- Moroz, Alexander Analytic continuation by means of the methods of divergent series. 91j:30002
- Trokhimchuk, Yu. Yu. On analytic continuation. (Russian. English summary) 91c:30002
- Items with secondary classifications in 30B40
- Antolin, J. (with Cruz, A.) Orthogonal polynomials and cut extrapolations. (Spanish summary) (see 91m:00037)
- Maximum entropy formalism and analytic extrapolation. 91a:81056
- Ataev, M. A theorem on the removal of singularities of an analytic function. (Russian) 91c:30003
- Cruz, A. see Antolin, J., (91m:00037)
- Howard, Eric J. Analyticity of almost everywhere differentiable functions. 91b:26015
- Li, Bang He (with Li, Ya Qing) Analytic and harmonic continuations and distributions. 91d:46045
- Li, Ya Qing see Li, Bang He, 91d:46045
- Mavrodi, N. N. Overconvergence of power series and complete regularity of the growth of a function on a ray. (Russian) 91j:30005

### 30B50 Dirichlet series and other series expansions, exponential series [see also 11M41, 42-XX]

- Bratishchev, A. V. The generation and development of the concept of condensation index. (Russian) 91b:30008
- Frolov, Yu. N. Representation of analytic functions by series in solutions of differential equations. 91c:30003
- Gol'dberg, A. A. (with Ostrovskii, I. V.) Indicators of finite-order entire functions that can be represented by Dirichlet series. (Russian. English summary) 91g:30001
- Komarov, A. V. see Napalkov, V. V., 91h:30004
- Korobeinik, Yu. F. Some applications of nontrivial expansions of zero in the theory of convolution operators. 91m:30003
- Leon'eva, T. A. On the convexity of the domain of convergence of a series of generalized exponentials. 91m:30004
- Liu, Quan Sheng On the order of growth of  $B$ -Dirichlet series. (Chinese. English summary) 91h:30003
- Mitškevich, A. The Riesz theorem for an integral of Laplace-Stieltjes type and for the Dirichlet series. 91c:30004
- A Tauberian theorem for the Laplace-Stieltjes integral and the Dirichlet series. 91h:30006
- Molodtsov, V. A. Representation of functions by Dirichlet series. (Russian) (see 91j:30017)
- Napalkov, V. V. (with Komarov, A. V.) Expansion of analytic functions in series in elementary solutions of a convolution equation. 91h:30004
- Orekhov, B. I. Representation of analytic functions by series in polynomials. (Russian) 91h:30009
- Orudzhev, G. A. Some inequalities that are connected with the growth of an analytic function in a half-plane. 91b:30010
- Ostrovskii, I. V. see Gol'dberg, A. A., 91g:30001
- Sheremet, M. N. Equivalence of the logarithms of the maximum modulus and the maximal term of an entire Dirichlet series. (Russian) 91c:30005
- Skaskiv, O. B. (with Sorokivskii, V. M.) Growth on horizontal rays of analytic functions that are represented by Dirichlet series. 91c:30005
- Sorokivskii, V. M. see Skaskiv, O. B., 91c:30005

Items with secondary classifications in 30B50

- Batty, Charles J. K. Tauberian theorems for the Laplace-Stieltjes transform. 91c:44001

- Bezkravnyi, Yu. D. Some generalizations of series in Faber polynomials. (Russian) 91h:41024
- Bhola, D. K. see Gupta, J. S., 91c:30050
- Bikmukhametov, I. Kh. Domains of completeness of a system of generalized exponentials. (Russian) 91b:30012
- Chakraborty, B. C. (with Rahman, Md. Muklesur) On the maximum terms of the derivatives of entire functions in several complex variables represented by multiple Dirichlet series. 91m:32002
- Dasud, S. Bases in the space of entire functions of several complex variables represented by Dirichlet series having finite order point. 91m:32001
- Grechanyuk, N. I. The growth cone of entire double Dirichlet series. 91h:32002
- Gupta, J. S. (with Bhola, D. K.) On entire functions of irregular growth defined by Dirichlet series. (Turkish summary) 91c:30050
- Kumar, Naresh On the logarithmic means of analytic functions of order zero. 91c:30053
- Mikhailov, A. B. Multiple representability of analytic functions by exponential series. (Russian) 91h:46040
- Rahman, Md. Muklesur see Chakraborty, B. C., 91m:32002
- Sheremet, M. N. Two-term asymptotics of entire Dirichlet series. (Russian) 91m:30036
- Sorokivskii, V. M. Growth of entire functions that are represented by Dirichlet series with complex exponents. (Russian) 91h:30079
- Sun, Dao Chun (with Yu, Jia Rong) On the distribution of values of random Dirichlet series. II. (Chinese summary) 91h:30019
- Ushakov, V. V. Conditions for the representability of analytic functions by generalized exponential series. (Russian) 91b:30074
- Yu, Jia Rong see Sun, Dao Chun, 91h:30019

### 30B60 Completeness problems, closure of a system of functions

- Abanin, A. V. Weakly sufficient sets and their properties. (Russian) 91c:30006
- Avetisyan, A. E. Necessary and sufficient conditions for the completeness of the system of functions  $(E_p(\lambda_n z; \mu))^\infty$  on a system of finite segments. (Russian) 91m:30005
- Azarin, V. S. (with Giner, V. B.) Completeness of systems of exponentials in convex domains. 91b:30011
- Bikmukhametov, I. Kh. Domains of completeness of a system of generalized exponentials. (Russian) 91b:30012
- Gasparyan, A. V. see Shamyay, F. A., (Not in MR)
- Giner, V. B. see Azarin, V. S., 91b:30011
- Khachatryan, I. O. see Levin, B. Ya., 91h:30005
- Levin, B. Ya. (with Khachatryan, I. O.) On the closure of systems of functions of Mittag-Leffler type under weighted uniform approximation in the complex domain. (Russian. English and Armenian summaries) 91h:30005
- Oskolkov, V. A. On the completeness and quasi-degree basis property of the systems  $\{z^n f(\lambda_n z)\}$ . 91c:30007
- Shamyay, F. A. (with Gasparyan, A. V.) Completeness of systems of simple fractions with fixed poles in spaces of holomorphic functions that are smooth up to the boundary. (Russian. Armenian summary) (Not in MR)

Items with secondary classifications in 30B60

- Krasichkov-Ternovskii, I. F. Interpretation of the Beurling-Malliavin theorem on the radius of completeness. 91h:42011
- Shapovalovskii, A. V. see Vinnitskii, B. V., 91h:42011
- Vinnitskii, B. V. (with Shapovalovskii, A. V.) Completeness of systems of exponentials with weight. 91h:42011

### 30B70 Continued fractions [see also 11A55, 40A15]

- Brezinski, Claude On the asymptotic behaviour of continued fractions [Appl. Numer. Math. 4 (1988), no. 2-4, 231-239; MR 90a:30010]. (see 91m:41002)
- Brown, David P. General continued fraction expansions in the  $z$  domain. 91h:30001
- Cargo, G. T. Perfect approximant points of  $\tanh z$ . 91b:30013
- Jacobsen, Lisa (with Waadeland, Haakon) When does  $f(z)$  have a regular  $C$ -fraction expansion or a normal Padé table? 91d:30003
- Domains of validity for some of Ramanujan's continued fraction formulas. 91h:30014
- Orthogonal polynomials, chain sequences, three-term recurrence relations and continued fractions. 91h:30006
- Meromorphic continuation of functions given by limit  $k$ -periodic continued fractions [Appl. Numer. Math. 4 (1988), no. 2-4, 323-336; MR 89m:30008]. (see 91m:41002)
- Magnus, Arne (with McCabe, John H.) On a continued fraction for  $\log_2(1+x)$ . 91c:30006
- McCabe, John H. see Magnus, Arne, 91c:30006
- Njåstad, Olav (with Waadeland, Haakon) Some remarks on nearness problems for continued fraction expansions. 91h:30015
- A survey of some results on separate convergence of continued fractions. 91h:30016
- Convergence of the Schur algorithm. 91c:30008
- Thron, W. J. Continued fraction identities derived from the invariance of the crossratio under L.f.t. 91f:30002
- Some results on separate convergence of continued fractions. 91m:30006
- Waadeland, Haakon see Njåstad, Olav, 91h:30015 and Jacobsen, Lisa, 91d:30003

Items with secondary classifications in 30B70

- Antolin, J. Maximum entropy formalism and analytic extrapolation. 91a:81056
- Cooper, S. Clement  $\delta$ -fraction solutions to Riccati equations. 91a:34005
- (with Jones, William B.; Magnus, Arne) General  $T$ -fraction expansions for ratios of hypergeometric functions [Appl. Numer. Math. 4 (1988), no. 2-4, 241-251; MR 89g:33005]. (see 91m:41002)
- (with Jones, William B.; Thron, W. J.) Orthogonal Laurent-polynomials and continued fractions associated with log-normal distributions. 91h:65049
- Hendriksen, Erik (with Njåstad, Olav) A Favard theorem for rational functions. 91c:30066
- Jacobsen, Lisa (with Masson, D. R.) On the convergence of limit periodic continued fractions  $K(a_n/1)$ , where  $a_n \rightarrow -\frac{1}{2}$ . III. 91h:40001

— On the Bauer-Muir transformation for continued fractions and its applications. 91b:40002

Jones, William B. (with Wyshinski, Nancy J.) Positive T-fraction expansions for a family of special functions. 91e:41015

— (with Thron, W. J.) A constructive proof of convergence of the even approximants of positive PC-fractions. 91a:30036

— (with Thron, W. J.) Continued fractions in numerical analysis [Appl. Numer. Math. 4 (1988), no. 2-4, 143-230; MR 90e:65021]. (see 91m:41002)

— see also Cooper, S. Clement; et al., 91k:65049 and (91m:41002)

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Bagdasaryan, D. T. (with Unanyan, A. G.) A lower bound for the modulus of M. M.

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Cho, Yong (with Kim, Yong Chan) Hadamard products of Bloch functions and its dual spaces. 91g:30002

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Knopfmacher, Arnold (with Knopfmacher, John; Ridley, J. N.) Unique factorizations of formal power series. 91b:30007

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Schiff, J. L. (with Walker, W. J.) A sampling theorem for a class of pseudoanalytic functions. 91E:30071

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Barnard, Roger W. (with Dayawansa, W. P.; Pearce, K.; Weinberg, David A.) Polynomials with nonnegative coefficients. 91k:30007

Batchaev, I. M. The A. A. Markov-S. N. Bernstein and S. M. Nikoľskii inequalities for algebraic polynomials in domains with a quasiconformal boundary. (Russian) 91b:30017

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Brandt, Manfred Representation formulas for the class of typically real polynomials. 91E:30003

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Milovanović, Gradimir V. (with Rajković, Predrag M.) Some considerations about complex orthogonal polynomials. 91m:30007

Newman, Donald J. (with Byrnes, J. S.) The  $L^4$  norm of a polynomial with coefficients  $\pm 1$ . 91d:30006

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Erfani, S. (with Ahmadi, M.; Ramchandran, Venkat) Comments on: "The general recurrence relation for arbitrary rational transformation of polynomials" [IEEE Trans. Circuits and Systems 36 (1989), no. 6, 917-919]. (Not in MR)

Govil, N. K. Inequalities for the derivative of a polynomial. 91b:30005

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— (with Smith, Brent) Sur une note récente relative aux polynômes à coefficients  $\pm 1$  et à la conjecture d'Erdős. (French. English summary) [On a recent note about polynomials with  $\pm 1$  coefficients and the Erdős conjecture] 91f:42002

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#### 30C15 Zeros of polynomials, rational functions, and other analytic functions (e.g. zeros of functions with bounded Dirichlet integral) {For algebraic theory, see 12D10; for real methods, see 26C10.}

Abian, Alexander (with Wilson, James A.) A theorem equivalent to the fundamental theorem of algebra. 91c:30009

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Gélinas, Sylvie (with Vaillancourt, Rémi) Recherche globale des zéros d'une fonction entière par la théorie de Fatou-Baker. (English summary) [Global search for the zeros of an entire function using the Fatou-Baker theory] 91b:30004

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Grothmann, R. Ostrowski gaps, overconvergence and zeros of polynomials. 91k:30010

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Koshel', S. M. (with Chekryzhov, S. S.) Approximate determination of zeros of analytic functions. (Not in MR)

Kumar, Sampath (with Shenoy, B. G.) A note on the location of critical points of quintic polynomials. 91a:30007

— (with Shenoy, B. G.) A note on the Ilyeff-Sendov conjecture. 91k:30011

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Bank, Steven B. A note on the location of complex zeros of solutions of linear differential equations. 91c:34003

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— (with Picinbono, Bernard) Extended table for eliminating the singularities in Routh's array. 91b:93117

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— (with Bhattacharyya, Shankar Prasad; Dahleh, Mohammed A.) Robust stability of a family of disc polynomials. 91f:93077

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Gethner, Robert M. Zeros of the successive derivatives of Hadamard gap series in the unit disk. 91b:30004

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Guadalupe García, Rafael (with Torrano, Emilio) Zeros of orthogonal polynomials associated to the Lebesgue measure on the ellipse. 91c:42028

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— (with Anderson, Brian D. O.; Mansour, Mohamed) Robust stability of polynomials with multilinear parameter dependence. 91d:93055

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Paldi, Eytan (with Paldi, Hedi Taub; Gutman, Shaul) The intersection of regions and root clustering. 91b:15020

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Panier, Eliane R. (with Fan, Michael K. H.; Tits, André L.) On the robust stability of polynomials with no cross-coupling between the perturbations in the coefficients of even and odd powers. 91b:93126

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 Gramain, François (with Schnitzer, F. J.) Ganze ganzwertige Funktionen: historische Bemerkungen. [Integer-valued entire functions: historical remarks] 91j:30021  
 Gupta, J. S. (with Bhola, D. K.) On entire functions of irregular growth defined by Dirichlet series. (Turkish summary) 91c:30050  
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 Li, Yong Yu (with Yang, Yu Zhen) Growth properties of a class of entire functions. (Chinese. English summary) 91d:30028  
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 Mayrodi, N. N. Complete regularity of the growth of a function on a ray. (Russian) (Not in MR)  
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 Shishkin, A. B. A local description of closed submodules in a special module of entire functions of exponential type. 91d:30030  
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- Sorokivskii, V. M. Growth of entire functions that are represented by Dirichlet series with complex exponents. (Russian) 91b:30079  
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- Anderson, James Milne (with Duncan, John) Duals of Banach spaces of entire functions. 91f:46034  
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 Kahane, Jean-Pierre Produits de Riesz et séries de Dirichlet. [Riesz products and Dirichlet series] 91e:11098  
 Kalton, N. J. see Eoff, C. M., 91c:47035  
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 Krasichkov-Ternovskii, I. F. Interpretation of the Beurling-Malliavin theorem on the radius of completeness. 91h:42011  
 Levin, B. Ya. (with Logvinenko, V. N.) Classes of functions that are subharmonic in  $\mathbb{R}^n$  and bounded on certain sets. (Russian. English summary) 91c:31017  
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 — Subharmonic functions of completely regular growth in a closed cone. 91m:31002  
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 Dai, Chong Ji (with Jin, Lu<sup>1</sup>) Meromorphic functions with derivatives having maximal defect value sum. (Chinese. English summary) 91f:30034  
 — see also Zhang, Qing De, 91d:30032 and Jin, Lu<sup>1</sup>, 91m:30037  
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 Gelfer, E. S. Some estimates in a class of entire functions. (Russian) (see 91j:00017)  
 Gol'dberg, A. A. (with Ostrovskii, I. V.) Indicators of entire functions of finite order that can be represented by Dirichlet series. 91h:30046  
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 Hellerstein, Simon (with Miles, Joseph; Rossi, John) On the growth of solutions of  $f'' + gf' + hf = 0$ . 91b:30047  
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 — see also Dai, Chong Ji, 91f:30034  
 Khom'yak, M. M. (with Sheremeta, M. N.) Entire Dirichlet series of finite lower  $R$ -order. (Ukrainian. Russian summary) (Not in MR)  
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- Qin, Gang Di Distribution of the Borel directions of a product of entire functions. (Chinese. English summary) **91g:30034**
- Ross, John see Heisterstein, Simon; et al. **91h:30047**
- Schneider, Walter J. see Barth, K. F., **91b:30081**
- Shea, Daniel F. (with Weitsman, Allen) An extremal property of entire functions with positive zeros. **91f:30035**
- Sheremeta, M. N. see Khom'yak, M. M., (Not in MR)
- Skaskiv, O. B. The Macintyre assumption about the absence of finite asymptotic values of an entire function with Fejér gaps. (Ukrainian. Russian summary) (Not in MR)
- Weitsman, Allen see Shea, Daniel F., **91f:30035**
- Wu, Gui Rong Some notes on the growth of entire functions. (Chinese. English summary) **91c:30054**
- Yi, Hong Xun Some results concerning differential polynomials. (Chinese) **91k:30070**
- On a result of Gross and Yang. **91k:30022**
- Zabolotskii, N. V. A spherical derivative of an entire function of zero order. (Ukrainian. Russian summary) (Not in MR)
- Zhang, Qing De (with Dai, Chong Ji) A counterexample to common Borel directions. (Chinese) **91d:30032**
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- Coardas, George (with Varga, Richard S.) Necessary and sufficient conditions and the Riemann hypothesis. **91d:11107**
- Dryanov, Dimitar P. (with Rahman, Qazi I.; Schmeisser, Gerhard) Converse theorems in the theory of approximate integration. **91c:41080**
- Erlmenko, A. E. (with Sodin, M. L.) On the behavior of an entire function on a sequence of concentric circles. **91c:30051**
- Gol'dberg, A. A. (with Ostrovskii, I. V.) Indicators of finite-order entire functions that can be represented by Dirichlet series. (Russian. English summary) **91g:30001**
- Gorina, O. V. Solvability of a class of differential equations in a space of functions that are analytic in a nonconvex domain and that have a given order of growth. **91k:34004**
- Gramain, François Fonctions entières d'une ou plusieurs variables complexes prenant des valeurs entières sur une progression géométrique. [Entire functions of one or several complex variables that take integer values on a geometric progression] **91e:11086**
- Jank, Gerhard Über die Nullstellen von Lösungen linearer Differentialgleichungen und eine Vermutung von A. Wiman. [On the zeros of solutions of linear differential equations, and a conjecture of A. Wiman] **91f:34005**
- Laine, Ilpo A note on the complex oscillation theory of nonhomogeneous linear differential equations. **91m:34009**
- Loosev, N. I. Algebraic and linear independence of values of certain classes of entire functions. **91a:11035**
- Mustafa, R. F. Spectral synthesis in a space of entire functions of bounded growth. (Russian) **91b:47071**
- Ostrovskii, I. V. see Gol'dberg, A. A., **91g:30001**
- Rahman, Qazi I. (with Schmeisser, Gerhard) Extension of a theorem of Laguerre to entire functions of exponential type. II. **91c:30049**
- see also Dryanov, Dimitar P.; et al., **91c:41080**
- Schmeisser, Gerhard see Rahman, Qazi I., **91c:30049** and Dryanov, Dimitar P.; et al., **91c:41080**
- Seip, Kristian Curves of maximum modulus in coherent state representations. (French summary) **91a:30018**
- Sheremeta, M. N. Two-term asymptotics of entire Dirichlet series. (Russian) **91m:30036**
- Sodin, M. L. see Erlmenko, A. E., **91c:30051**
- Urahe, Hiroeobu Some advances in the theory of factorization of entire or meromorphic functions. **91c:30045**
- Varga, Richard S. see Coardas, George, **91d:11107**
- Wang, Shu Pei Three theorems concerning the exponent of convergence of the zero-sequence of solutions of  $f'' + Af = 0$  where  $A$  is entire. **91a:34006**
- Correction to: "Three theorems concerning the exponent of convergence of the zero-sequence of solutions of  $f'' + Af = 0$  where  $A$  is entire" [Complex Variables Theory Appl. **10** (1988), no. 4, 311–317; MR **91a:34006**]. **91g:34005**
- Yurov, P. G. A Cauchy-type integral over an open contour. **91c:30080**

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- Arakelyan, N. U. see Avetisyan, Ruben Abelevich; et al., **91f:30036**
- Avetisyan, Ruben Abelevich (with Arakelyan, N. U.; Gonchar, A. A.) Asymptotic properties of meromorphic functions. **91f:30036**
- Barsegyan, G. A. (with Martirosyan, K. N.) On values of analytic functions on sets of  $a$ -points of a function that is meromorphic in a given domain. **91f:30037**
- Bergweiler, Walter On the growth rate of composite meromorphic functions. **91a:30026**
- Danchenko, V. I. Separation of singularities of meromorphic functions by multiply connected domains. (Russian) (see **91j:00017**)
- Gol'dberg, A. A. (with Sokolovskaya, O. P.) Some relations for meromorphic functions whose order or lower order is less than one. II. **91k:30071**
- (with Tkach, I. M.) A remark on Polya peaks. (Not in MR)
- Gonchar, A. A. see Avetisyan, Ruben Abelevich; et al., **91f:30036**
- Jiang, Nan (with Lin, Yong) Uniqueness theorems for meromorphic functions. (Chinese. English summary) **91b:30066**
- Kurokawa, Toshiko see Matsumoto, Kikui, **91d:30033**
- Lahiri, Indrajit Generalised order of the derivative of a meromorphic function. II. **91m:30038**
- Lin, Yong On Valiron's basic theorem. (Chinese. English summary) **91f:30038**
- see also Jiang, Nan, **91b:30066**
- Martirosyan, K. N. see Barsegyan, G. A., **91f:30037**
- Matsumoto, Kikui (with Kurokawa, Toshiko) Meromorphic functions with a perfect set as the set of singularities. **91d:30033**
- Michalski, Jacek A sufficient condition for univalence of functions meromorphic in the unit disc. (Polish summary) **91c:30052**
- Mokhen'ko, A. Z. An estimate for the modulus of a logarithmic derivative of a function that is meromorphic in an angular region, and its application. **91a:30027**

- Reczek, Krzysztof On the growth of meromorphic functions. **91h:30087**
- Sokolovskaya, O. P. see Gol'dberg, A. A., **91k:30071**
- Tkach, I. M. see Gol'dberg, A. A., (Not in MR)
- Winkler, Jörg On the behavior of meromorphic functions in the plane, if the preimages of two values or subsets of preimages are neighbored. **91e:30053**
- Ye, Shou Zhen A generalization of the argument principle. (Chinese. English summary) **91i:30023**
- Yi, Hong Xun A question of C. C. Yang on the uniqueness of entire functions. **91h:30088**

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- Aksent'ev, L. A. (with Kazantsev, A. V.) A new property of the Nehari class and its application. **91b:30029**
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- Dai, Chong Ji (with Jin, Lu<sup>1</sup>) Meromorphic functions with derivatives having maximal defect value sum. (Chinese. English summary) **91f:30034**
- see also Zhang, Qing De, **91d:30032**; Jin, Lu<sup>1</sup>, **91c:30057** and **91m:30037**
- Deng, Guan Tie Théorème d'existence et d'unicité pour les fonctions méromorphes dans un demi-plan. (English summary) [An existence and uniqueness theorem for meromorphic functions in a half-plane] **91b:30110**
- Dernek, A. Certain classes of meromorphic functions. (Polish summary) **91j:30012**
- Grigoryan, L. D. Estimates for components of meromorphic functions in multiply connected domains. (Russian. Serbo-Croatian summary) **91d:30011**
- Hayman, W. K. (with Miles, Joseph) On the growth of a meromorphic function and its derivatives. **91c:30056**
- Jin, Lu<sup>1</sup> (with Dai, Chong Ji) On a conjecture of F. Nevanlinna concerning deficient function. II. **91m:30037**
- (with Dai, Chong Ji) Deficient functions and asymptotic functions of entire functions. (Chinese) **91c:30057**
- see also Dai, Chong Ji, **91f:30034**
- Kazantsev, A. V. see Aksent'ev, L. A., **91b:30029**
- Lahiri, Indrajit Generalised proximate order of meromorphic functions. (Serbo-Croatian summary) **91j:30023**
- Miles, Joseph see Hayman, W. K., **91c:30056**
- Mokhen'ko, A. Z. On the growth of meromorphic solutions of algebraic differential equations in angular domains. **91k:34006**
- Sarkisyan, S. Ts. Asymptotic properties of meromorphic solutions of algebraic differential equations. (Russian. English and Armenian summaries) **91b:34009**
- Steinmetz, Norbert Meromorphic solutions of second-order algebraic differential equations. **91h:34005**
- Su, Gui Ping The relative defects of meromorphic functions. (Chinese. English summary) **91a:30032**
- Tu, Zhen Han (with Xiao, Xiu Zhi) On the meromorphic solutions of system of higher-order algebraic differential equations. **91j:34014**
- Xiao, Xiu Zhi see Tu, Zhen Han, **91j:34014**
- Yi, Hong Xun Some results concerning differential polynomials. (Chinese) **91k:30070**
- On a result of Singh. **91i:30029**
- Zabolotskii, N. V. Asymptotic behavior of  $\delta$ -subharmonic functions of order zero. **91c:30060**
- Zhang, Qing De (with Dai, Chong Ji) A counterexample to common Borel directions. (Chinese) **91d:30032**

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- Abi-Khuzam, Faruk F. Meromorphic functions with harmonic  $\omega$ -function. **91d:30034**
- A spread relation for entire functions with negative zeros. **91c:30055**
- Bergweiler, Walter Maximum modulus, characteristic, and area on the sphere. **91k:30072**
- On meromorphic functions that share three values and on the exceptional set in Wiman-Valiron theory. **91f:30039**
- Bo, Sheng Guang (with Sun, Dao Chun; Liu, Zhi Ran) Angular distribution of meromorphic functions and their derivatives. (Chinese. English summary) **91b:30089**
- Boutabaa, Abdelbaki Théorie de Nevanlinna  $p$ -adique. (English summary) [ $p$ -adic Nevanlinna theory] **91m:30039**
- Cai, Jian Simple filling discs of meromorphic functions. (Chinese. English summary) **91h:30049**
- Chen, Zong Xuan (with Zhang, Xi Tang) Singular directions of meromorphic functions with infinite order and their derivatives. (Chinese. English summary) **91c:30054**
- see also Zhang, Xi Tang, **91k:30076**
- Dai, Chong Ji (with Lin, Yu Kun) Asymptotic values of meromorphic functions and their derivatives. (Chinese. English summary) **91h:30050**
- (with Yang, Chung-chun<sup>1</sup>) On the growth of linear differential polynomials of meromorphic functions. **91h:30051**
- see also Li, Bao Qin, **91c:30056** and Jin, Lu<sup>1</sup>, **91c:30057**
- Drasin, David (with Weitsman, Allen) Bounds on the sums of deficiencies of meromorphic functions of finite order. **91b:30024**
- Du, Cheng Lin see Yang, Yu Zhen, (Not in MR)
- Dukane, Sangeeta V. see Singh, Anand Prakash, **91i:30026**
- Frank, Günter Über die Nullstellen von linearen Differentialpolynomen mit meromorphen Koeffizienten. [On the zeros of linear differential polynomials with meromorphic coefficients] **91h:30052**
- (with Weissenborn, Gerd) On the zeros of linear differential polynomials of meromorphic functions. **91a:30028**
- Gao, Shi An (with Langley, J. K.) On the zeros of certain linear differential polynomials. **91m:30040**
- Girela, Daniel On analytic functions with finite Dirichlet integral. **91c:30055**
- Gletzer, E. V. Meromorphic functions with zeros and poles in small angles. II. **91j:30022**
- Guo, Yu<sup>1</sup> Singular directions of algebraic functions of  $(m, n, p)$  order. (Chinese. English summary) **91h:30053**
- Hashimoto, Yajir (with Matsumoto, Kikui) Picard sets admitting exceptionally ramified meromorphic functions. **91a:30029**

- Hayman, W. K. (with Miles, Joseph) On the growth of a meromorphic function and its derivatives. 91e:30056
- He, Li Qun Amplitude distribution of meromorphic functions in connection with their derivatives and multiple values. (Chinese. English summary) (Not in MR)
- Huang, Bin A modified  $\alpha$ -deficiency and the problem of the maximum sum of deficiencies. (Chinese. English summary) (Not in MR)
- Ishizaki, Katsuya Some remarks on results of Mues about deficiency sums of derivatives. 91k:30073
- Jin, Li<sup>1</sup> (with Dai, Chong Ji) Deficient functions and asymptotic functions of entire functions. (Chinese) 91e:30057
- Kahala, V. P. An application of weighted Nevanlinna characteristics. (Russian) (see 91j:30017)
- Lahiri, Indrajit Generalised proximate order of meromorphic functions. (Serbo-Croatian summary) 91j:30023
- Certain modified approach in integral and meromorphic functions. 91b:30090
- Langley, J. K. On the zeros of second order linear differential polynomials. 91h:30054
- see also Gao, Shi An, 91m:30040
- Li, Bao Qin (with Dai, Chong Ji) Modular distribution of power series with Fabry gaps. (Chinese) 91c:30056
- Lin, Yu Xun See Dai, Chong Ji, 91h:30050
- Lin, Yun Yong Algebroid functions sharing some values. (Chinese. English summary) 91c:30057
- Liu, Zhi Ran see Bo, Sheng Guang; et al., 91b:30089
- Marchenko, I. I. (with Shcherba, A. I.) On the magnitudes of deviations of meromorphic functions. 91b:30091
- Matsumoto, Kikui see Hashimoto, Yûji, 91a:30029
- Miles, Joseph see Hayman, W. K., 91c:30056
- Mues, Erwin Bemerkungen zum vier-Punkte-Satz. [Remarks on the four-point theorem] 91f:30040
- Meromorphic functions sharing four values. 91c:30058
- Ostrovskii, I. V. (with Ulanovskii, A. M.) Classes of complex-valued Borel measures that can be uniquely determined by restrictions. (Russian. English summary) 91f:30041
- Ozawa, Mitsuru Zeros of certain differential polynomials. 91g:30035
- Patil, Shivajirao A. see Singh, Anand Prakash, 91f:30027
- Pavčević, Zarko An integral condition for functions of bounded form. (Russian. Serbo-Croatian summary) 91a:30030
- Shcherba, A. I. see Marchenko, I. I., 91b:30091
- Shea, Daniel F. Minimum modulus theorems for meromorphic functions at Pólya peaks. 91e:30092
- Sheremeta, M. N. Some classes of functions that are analytic in the disk. (Russian) 91d:30035
- An  $l$ -index and an  $l$ -distribution of the values of entire functions. (Russian) 91g:30036
- Complete equivalence of logarithms of the maximum modulus and the maximal term of an entire Dirichlet series. 91f:30025
- Shi, Jun Xian On the existence of Borel points of meromorphic algebroid functions in the unit circle. (Chinese summary) 91a:30031
- Singh, Anand Prakash (with Dukane, Sangeeta V.) Some notes on differential polynomials. 91f:30026
- (with Patil, Shivajirao A.) Relative defects of meromorphic functions. 91h:30027
- Sodin, M. L. Distribution of preimages of measures under the action of a meromorphic function. 91m:30041
- On the distribution of the values of meromorphic functions of finite order with respect to the arguments. 91h:30055
- Sokolovskaya, O. P. New applications of an Essén-Shea theorem in the theory of meromorphic functions. (Russian) 91c:30059
- Su, Gui Ping The relative defects of meromorphic functions. (Chinese. English summary) 91a:30032
- Sukiasyan, G. A. Defects of functions with simple zeros and poles that alternate on a system of rays. (Russian. Armenian summary) 91c:30058
- Sun, Dao Chun see Bo, Sheng Guang; et al., 91b:30089
- Tan, Yue Wu On a modified deficiency of algebroid functions. (Chinese. English summary) (Not in MR)
- Tolge, Kazuya On a problem of Hinkkanen about Hadamard products. 91d:30036
- Ueda, Hideharu On the zero-one-pole set of a meromorphic function. II. 91d:30037
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- Winkler, Jörg On functions with strongly growing spherical derivatives. 91d:30038
- Yang, Chung-chun<sup>1</sup> see Dai, Chong Ji, 91h:30051
- Yang, Lian Zhong Relations between the growth of transcendental algebroid functions and the number of their deficient functions. (Chinese) 91a:30033
- Characteristic functions of a meromorphic function and its derivatives. 91b:30093
- Sums of deficiencies of algebroid functions. 91k:30074
- Entire functions that share finite values with their derivatives. 91m:30042
- Yang, Ming Ze (with Wang, Ping<sup>2</sup>) A normality condition for a class of meromorphic functions and the corresponding singular directions. (Chinese. English summary) 91i:30028
- Yang, Yu Zhen (with Du, Cheng Lin) The exact lower order of meromorphic functions. (Chinese. English summary) (Not in MR)
- Yi, Hong Xun Multiple values and uniqueness of meromorphic functions. (Chinese) 91c:30059
- On the value distribution of  $f/f'$ . (Chinese) 91b:30094
- On a result of Singh. 91f:30029
- Meromorphic functions that share two or three values. 91k:30075
- Zabolotskii, N. V. Asymptotic behavior of  $\delta$ -subharmonic functions of order zero. 91c:30060
- Zhan, Xiao Ping Picard set of a kind of differential polynomials. 91k:30030
- Zhang, Guang Hou A general theorem on meromorphic functions and its application. (Chinese) 91d:30039
- Zhang, Xi Tang (with Chen, Zong Xuan) Singular directions of meromorphic functions and of their derivatives. (Chinese. English summary) 91k:30076
- see also Chen, Zong Xuan, 91c:30054
- Zhong, Chang Yong A note to the Nevanlinna's fundamental theorem. 91e:30060

## Items with secondary classifications in 30D35

- Atsugi, Atsushi Some inequalities for some increasing additive functionals of planar Brownian motion and an application to Nevanlinna theory. 91i:60199
- Barsegian, G. A. (with Martirosyan, K. N.) On values of analytic functions on sets of  $\alpha$ -points of a function that is meromorphic in a given domain. 91f:30037
- Bergweiler, Walter Fix-points of meromorphic functions and iterated entire functions. 91k:30064
- Brüggemann, Franz On the zeros of fundamental systems of linear differential equations with polynomial coefficients. 91j:34009
- On solutions of linear differential equations with real zeros; proof of a conjecture of Hellerstein and Rossi. 91m:34007
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- Din' Ten Shon Boundary tangential values of a function of the Hardy classes  $H_p^0$ ,  $0 < p < \infty$ . (Not in MR)
- Hashimoto, Yôji (with Matsumoto, Kikui) Picard sets admitting exceptionally ramified meromorphic functions. 91a:30029
- Järvi, Pentti On the boundary behavior of holomorphic mappings of plane domains into Riemann surfaces. 91e:30074
- Generalizations of Picard's theorem for Riemann surfaces. 91e:30075
- Kudzhma, R. Complex analysis and Brownian motion. (Russian) (*see* 91g:60005)
- Makarov, N. G. On the radial behavior of Bloch functions. (Russian) 91k:30078
- Matsumoto, Kikui *see* Hashimoto, Yôji, 91a:30029
- Shiga, Hiroshige On the boundary behavior of holomorphic mappings of plane domains to Riemann surfaces. 91a:30042
- Skaskiv, O. B. The Macintyre assumption about the absence of finite asymptotic values of an entire function with Fejér gaps. (Ukrainian. Russian summary) (Not in MR)
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- Wang, Ping<sup>2</sup> *see* Yang, Ming Ze, 91f:30045
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- Rashkovskii, A. Yu. Theorems on the compactness of families of subharmonic functions, and majorants of harmonic measures. 91k:31001

#### 30D50 Blaschke products, bounded mean oscillation, bounded characteristic, bounded functions, functions with positive real part

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- Colonna, Flavia The Bloch constant of bounded analytic functions on a multiply connected domain. 91j:30025
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- Hallenbeck, David J. (with Samotij, Krzysztof) On radial variation of bounded analytic functions. 91j:30026
- Jevtić, Miroslav On Blaschke products in Besov spaces. 91c:30062
- Lä, Yi Nian On the Nevanlinna classes of holomorphic functions on compact bordered Riemann surfaces. 91a:30061
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- Guillory, Carroll A characterization of a sparse Blaschke product. 91b:46047
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- Din' Ten Shon Boundary tangential values of a function of the Hardy classes  $H_p^0$ ,  $0 < p < \infty$ . (Not in MR)
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- Guadalupe Hernández, José Javier (with Rezola, M. L.) Boundary values of  $H^p$  in weighted plane domains. (Spanish. English summary) (*see* 91m:30037)
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- Khavinson, Dmitry *see* Anderson, James Milne, 91e:30062
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- Kwon, E. G. Image area growth of the derivative of an inner function. 91e:30063
- Mean growth of the hyperbolic Hardy class functions. 91e:30064
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- Matt, Tsukasa A consideration on compositions of BMO functions with inner functions. (Japanese) (Not in MR)
- Ouyang, Cai Heng *see* He, Yu Zan, 91a:30035
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- Levin, B. Ya. Completeness of systems of functions, quasi-analyticity and subharmonic majorants. (Russian. English summary) 91g:46045
- Siddiqi, Jamil A. Inclusion and differentiability criteria for  $L^p$ -classes of infinitely differentiable functions. 91b:46030
- Inverse-closed Carleman algebras of infinitely differentiable functions. 91g:46060
- Tumarkin, G. Ts. Approximation of functions, which are analytic in a simply connected domain and can be represented by a Cauchy-type integral, by sequences of rational fractions with poles given by a table. (Russian. English summary) 91b:30122

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- Bezanilla López, A. On a lower bound for the order of an  $L$ -entire function on  $C(I)$ . (Spanish. English summary) 91c:30064
- Grushevskii, S. P. Estimates for boundary values of Schwarz integrals of singular measures. (Russian) 91b:30050
- Hallenbeck, David J. (with Samotij, Krzysztof) Radial growth and variation of Dirichlet finite holomorphic functions in the disk. 91b:30060
- (with Samotij, Krzysztof) On radial variation of holomorphic functions with  $l^p$  Taylor coefficients. 91m:30049
- Korobeinik, Yu. F. Maximal and  $\gamma$ -sufficient sets. Applications to entire functions. I. (Russian) 91b:30081
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### Items with secondary classifications in 30D99

- Alekna, Petras Inhomogene Riemannsche Randwertaufgabe mit unendlichem Index der gradigen Ordnung für einen Winkelraum. [Inhomogeneous Riemann boundary value problem with infinite index of even order for an angular domain] 91b:30056
- Bruna, Joaquim (with Pascuas, Daniel) Interpolation in  $A^{-\infty}$ . 91b:30061
- Gorbuzov, V. N. (with Nemets, V. S.) Entire function-solutions of a first-order differential equation with generalized quasipolynomial coefficients. (Russian. English and Serbo-Croatian summaries) 91b:34005
- Gorina, O. V. A differential operator with constant coefficients in spaces of analytic functions of given growth. (Russian) 91a:47040
- Horowitz, Alan L. (with Rubel, Lee A.) Differentially cyclic functions. 91b:34005
- Mhaskar, H. N. (with Micchelli, Charles A.) On the  $n$ -width for weighted approximation of entire functions. (see 91j:41002)
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- Millar, Robert F. Inverse problems for a class of Schwarz functions. 91g:30031
- Nemets, V. S. see Gorbuzov, V. N., 91b:34005

- Pascuas, Daniel see Bruna, Joaquim, 91b:30061
- Richardson, Stanley The characterization of curves by global properties of their Schwarz functions. 91g:30032
- Rubel, Lee A. see Horowitz, Alan L., 91b:34005
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- Widths of certain classes of functions that are analytic in a unit disk. II. 91j:41038

### 30Exx Miscellaneous topics of analysis in the complex domain

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- Ball, Joseph A. (with Gohberg, Israel; Rodman, Leiba) Two-sided Nudel'man interpolation problems for rational matrix functions. 91g:30040
- (with Gohberg, Israel; Rodman, Leiba) Simultaneous residue interpolation problems for rational matrix functions. 91g:30041
- (with Kang, Jeongook) Matrix polynomial solutions of tangential Lagrange-Sylvester interpolation conditions of low McMillan degree. 91b:30033
- Bonsall, F. F. A new proof of Garnett's theorem on harmonic interpolation. 91g:30042
- Bruna, Joaquim (with Pascuas, Daniel) Interpolation in  $A^{-\infty}$ . 91b:30061
- Brutman, L. (with Vértesi, Péter; Xu, Yuan) Interpolation by polynomials in  $z$  and  $z^{-1}$  on an annulus. 91b:30051
- Dubovoi, V. K. (with Zinenko, S. N.) On the connection between an elementary multiple form of incomplete rank and the degenerate Schur problem. 91d:30040
- Dym, Harry On Hermitian block Hankel matrices, matrix polynomials, the Hamburger moment problem, interpolation and maximum entropy. 91c:30065
- Franciscs, G. Mean convergence of Birkhoff interpolation based on the roots of unity: a problem of P. Turán. 91b:30082
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- Gohberg, Israel see Ball, Joseph A.; et al., 91g:30040 and 91g:30041
- Golub, Gene H. (with Gutknecht, Martin H.) Modified moments for indefinite weight functions. 91b:30034
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- Hendriksen, Erik (with Njåstad, Olav) A Favard theorem for rational functions. 91c:30066
- Iancu, C. The error analysis in interpolation by complex spline functions. (Romanian summary) 91g:30043
- Kang, Jeongook see Ball, Joseph A., 91b:30033
- McPhail, J. Darrell A weighted interpolation problem for analytic functions. 91c:30065
- Njåstad, Olav Solution of the strong Hamburger moment problem by Laurent continued fractions [Appl. Numer. Math. 4 (1988), no. 2-4, 351-360; MR 89m:30076]. (see 91m:41002)
- A modified Schur algorithm and an extended Hamburger moment problem. 91m:30050
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- Shen, Xie Chang Introduction of a new class of interpolants—Birkhoff interpolants in the complex plane. (Chinese. English summary) 91c:30067
- The order of approximation in the mean by generalized Lagrange interpolating polynomials in a Jordan domain. (Chinese. English summary) (Not in MR)
- Sri Ranga, A. On a recurrence formula associated with strong distributions. 91c:30068
- Stojanova, Mileva P. Overconvergence of some complex interpolants. 91c:30069
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- Takahashi, Sechiko Nevanlinna parametrizations for the extended interpolation problem. 91b:30062
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- Anderson, Brian D. O. (with Antoulas, A. C.) Rational interpolation and state-variable realizations. 91b:93025
- Antoulas, A. C. see Anderson, Brian D. O., 91b:93025
- Bercovici, Hari (with Foias, Ciprian; Tannenbaum, Allen) A spectral commutant lifting theorem. 91j:47006
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- 30F10 Compact Riemann surfaces and uniformization**  
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- Ishida, Hisashi Harmonic Dirichlet functions and the components of harmonic boundaries of Riemann surfaces. 91c:30073

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#### 30F35 Fuchsian groups and automorphic functions

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### 30Gxx Generalized function theory

#### 30G06 Non-Archimedean function theory [see also 12J25]; nonstandard function theory [see also 03H05]

- van den Berg, I. P. Sur la sommation au plus petit terme des séries divergentes. (English summary) [Summation of divergent series to the smallest term] 91e:30078

Items with secondary classifications in 30G06

- Boutabaa, Abdelhak. Théorie de Nevanlinna  $p$ -adique. (English summary) [ $p$ -adic Nevanlinna theory] 91m:30039
- Laohakosol, Wichian. Some extensions of the Skolem-Mahler-Lech theorem. 91b:11017

#### 30G12 Finely holomorphic functions and topological function theory

Items with secondary classifications in 30G12

- Abdushukurov, A. M. Integral representation of solutions of the Moisil-Teodoresco system with singularities in the lower terms. (Russian. Tajiki summary) 91k:35069
- On a model Moisil-Teodoresco system with singularities in the lower terms, on the plane. (Russian. Tajiki summary) 91k:35070

#### 30G20 Generalizations of Bers or Vekua type (pseudoanalytic, $p$ -analytic, etc.)

- Balabaev, V. E. A three-dimensional analogue of the Cauchy-Riemann system for analytic functions of two complex variables. 91b:30136
- Buchanan, J. L. (with Gilbert, Robert P.) A solution to the equations of shell theory. 91e:30079
- Čanak, Miloš. Randwertaufgabe von Riemann-Typus für die  $p$ -polyanalytischen Funktionen auf der spiralförmigen Kontur. (Serbo-Croatian summary) [A boundary value problem of Riemann type for  $p$ -polyanalytic functions on a spiral-shaped contour] 91b:30137
- Gilbert, Robert P. *see* Buchanan, J. L., 91e:30079
- Jain, Rajendra Kumar *see* Youvaraj, G. P., 91f:30041
- Koca, Kerim. Über die Eigenschaften der Räume  $P_0(F^n, f^n)$  und  $P_0(F^n, i^n)$ . (Serbo-Croatian summary) [On the properties of the spaces  $P_0(F^n, f^n)$  and  $P_0(F^n, i^n)$ ] 91b:30138
- Der Raum  $P_0(F, f)$  in den verallgemeinerten analytischen Funktionen. [The space  $P_0(F, f)$  in the theory of generalized analytic functions] 91k:30093



- (with Withalm, Claudio) Über die Eigenschaften des Raumes  $P_D(F, FF)$ . [On the properties of the space  $P_D(F, FF)$ ] 91c:30091
- Pseudoholomorphe Logarithmusfunktionen. [Pseudoholomorphic logarithm functions] 91j:30036
- Mamaturliev, T. M. Some cases of uniqueness and existence of  $n$ -sheeted solutions of the Carleman equation. (Russian) (Not in MR)
- Pascali, Dan Basic representations of polyanalytic functions. 91c:30092
- Pchelin, B. K. On the general theory of polyanalytic functions. (Russian) 91b:30139
- Piven', V. F. On the theory of axisymmetric generalized analytic functions in dynamical processes. (Not in MR)
- Rasulov, A. B. Some boundary value problems for a system of higher-order differentiated equations with analytic coefficients. (Russian. Tajiki summary) 91a:30045
- Schiff, J. L. (with Walker, W. J.) A Bieberbach condition for a class of pseudo-analytic functions. 91c:30093
- (with Walker, W. J.) A sampling theorem for a class of pseudoanalytic functions. 91f:30071
- Tutschke, Wolfgang Initial value problems with generalized analytic initial functions on Riemann surfaces. 91b:30140
- Walker, W. J. see Schiff, J. L., 91c:30093 and 91f:30071
- Withalm, Claudio see Kocs, Kerim, 91c:30091
- Yeh, R. Z. Hyperholomorphic functions and higher order partial differential equations in the plane. 91a:30046
- Youvaraj, G. P. (with Jain, Rajendra Kumar<sup>2</sup>) On pseudo-analytic matrix functions. 91c:30041
- Zeng, Yue Sheng Riemann problems for hyperanalytic functions on countably many nonsmooth closed curves. (Chinese) 91g:30051
- Items with secondary classifications in 30G20**
- Aronsson, Gunnar Representation of a  $p$ -harmonic function near a critical point in the plane. 91c:31009
- Baizhev, S. see Mukhammadiev, E. M., 91c:30083
- Berglex, Peter Über Lösungsdarstellungen bei partiellen Differentialgleichungen durch Differentialoperatoren. [On representations of solutions for partial differential equations by means of differential operators] 91c:35032
- Cima, Joseph A. (with Derrick, W. R.) Normal solutions of the Beltrami equation. II. 91f:30013
- Derrick, W. R. see Cima, Joseph A., 91f:30013
- Meunargiya, O. V. see Vekua, N. P., 91c:30085
- Mukhammadiev, E. M. (with Baizhev, S.) Noethericity of generalized Cauchy-Riemann equations. (Russian. Tajiki summary) 91c:30083
- Mukhsimov, A. Construction of solutions of a singular differential equation of elliptic type in the form of double power series. (Russian. Tajiki summary) 91b:35076
- Radzhabov, N. R. On the theory of second-order linear elliptic systems whose entire boundary is a singular line. (Russian. Serbo-Croatian summary) 91b:35069
- Schulz, Friedmar Univalent solutions of elliptic systems of Heinz-Lewy type. (French summary) 91d:35066
- Sirachodinov, M. M. Periodic solutions of a first-order elliptic system. (Russian) 91m:35036
- Tungatarov, A. A class of elliptic systems in the plane with a singular point. 91g:30097
- Tutschke, Wolfgang (with Withalm, Claudio) Nonholomorphic solutions to ordinary differential equations in the complex domain. 91g:34004
- Vekua, N. P. (with Meunargiya, O. V.) On the factorization of some matrices of functions. (Russian) 91c:30085
- Withalm, Claudio see Tutschke, Wolfgang, 91g:34004
- Xu, Yong Zhi Dirichlet problem for a class of second order nonlinear elliptic systems. 91f:35094

### 30G30 Other generalizations of analytic functions (including abstract-valued functions)

- Dai, Dao Qing see Lin, Wei<sup>1</sup>, 91m:30059
- Lin, Wei<sup>1</sup> (with Dai, Dao Qing) The Cauchy type integral for  $M$ -analytic function and its application. 91m:30059
- Pan'ka, S. V. Representation of a solution of a generalized Cauchy-Riemann system and its applications. 91j:30037
- Shapiro, M. V. On some boundary-value problems for functions with values in Clifford algebra. (Serbo-Croatian summary) 91b:30141
- Zeng, Yue Sheng On the singularities of the  $Q$ -holomorphic matrix values function. (Chinese summary) 91j:30038
- A class of nondegenerate generalized  $Q$ -holomorphic matrix-valued functions. (Chinese. English summary) (Not in MR)

### Items with secondary classifications in 30G30

- Borichev, A. A. Errata: "The generalized Fourier transform, the Titchmarsh theorem and almost analytic functions". 91m:4201b
- The generalized Fourier transform, the Titchmarsh theorem and almost analytic functions. 91m:4201a
- Declu, Elena On the dual operator nodes on complex Banach spaces. (Romanian summary) 91b:47038
- Grigoryan, Suren Arshakovich Generalized analytic functions in the sense of Arens and Singer. 91e:46070
- Pascali, Dan Basic representations of polyanalytic functions. 91c:30092
- Semmes, Stephen Interpolation of Banach spaces, differential geometry and differential equations. 91e:46105

### 30G35 Functions of hypercomplex variables and generalized variables

- Abul-Ez, M. A. (with Constaes, D.) Basic sets of polynomials in Clifford analysis. 91d:30044

- (with Constaes, D.) Basic sets of polynomials in Clifford analysis. 91c:30080
- Brummelhuis, R. G. M. A Bochner-Martinelli formula for vector fields which satisfy the generalized Cauchy-Riemann equations. 91f:30072
- Čajlijan, Mehmet On the hypercomplex areolar monogenic functions. (Serbo-Croatian summary) 91b:30069
- Constales, D. The Bergman and Szegő kernels for separately monogenic functions. (German and Russian summaries) 91b:30070
- see also Abul-Ez, M. A., 91d:30044 and 91c:30080
- Gilbert, John E. (with Murray, Margaret A. M.)  $H^p$ -theory on Euclidean space and the Dirac operator. 91c:30094
- Inenaga, Yoshihiko (with Yanagiwara, Hiroki) On a differentiability and  $S$ -regularity of quaternionic functions. 91b:30094
- Jank, Gerhard (with Sommen, F.) Clifford analysis, biaxial symmetry and pseudoanalytic functions. 91g:30052
- Jotor, O. A contribution to the theory of quaternions. (Macedonian summary) (Not in MR)
- Li Hing So'n Extension problem for functions with values in a Clifford algebra. 91g:30053
- Malonek, Helmut A new hypercomplex structure of the Euclidean space  $\mathbb{R}^{n+1}$  and the concept of hypercomplex differentiability. 91f:30073
- Murray, Margaret A. M. see Gilbert, John E., 91c:30094
- Roberts, D. E. Clifford algebras and vector-valued rational forms. I. 91b:30095
- Ryan, John Complex Clifford analysis and domains of holomorphy. 91g:30054
- Snyder, Herbert H. A theorem of generalized Cauchy-Pompeiu type on finite-dimensional associative algebras. 91c:30081
- Sommen, F. Monogenic differential calculus. 91b:30096
- see also Jank, Gerhard, 91g:30052
- Xu, Zhen Yuan<sup>1</sup> (with Zhang, Wan Guo) The Neumann problem for hypercomplex functions in a Clifford algebra. (Chinese. English summary) 91j:30039
- On boundary value problem of Neumann type for hypercomplex function with values in a Clifford algebra. 91c:30082
- Yanagiwara, Hiroki see Inenaga, Yoshihiko, 91b:30094
- Zeng, Yue Sheng The Riemann boundary value problem for hyperanalytic functions on irreducible closed curves. (Chinese. English summary) (Not in MR)
- Zhang, Wan Guo see Xu, Zhen Yuan<sup>1</sup>, 91j:30039

### Items with secondary classifications in 30G35

- Cheng, Jin<sup>2</sup> see Xu, Zhen Yuan<sup>1</sup>; et al., 91j:31003
- Cnops, Jan Orthogonal polynomials in symmetrical domains of  $\mathbb{R}^n$ . 91a:33006
- Gilbert, Robert P. (with Xu, Yong Zhi) A function theory for thin elastic shells. 91c:73087
- Gürlebeck, Klaus (with Sprössig, Wolfgang) ★ Quaternionic analysis and elliptic boundary value problems. 91b:35002a
- (with Sprössig, Wolfgang) ★ Quaternionic analysis and elliptic boundary value problems. 91b:35002b
- Ryan, John Cells of harmonicity and generalized Cauchy integral formulae. 91g:32014
- Sommen, F. Radon and X-ray transforms in Clifford analysis. 91b:44002
- Sprössig, Wolfgang see Gürlebeck, Klaus, 91b:35002a and 91b:35002b
- Xu, Yong Zhi see Gilbert, Robert P., 91c:73087
- Xu, Zhen Yuan<sup>1</sup> (with Cheng, Jin<sup>2</sup>; Zhang, Wan Guo) A harmonic conjugate of the Poisson kernel and a boundary value problem for monogenic functions in the unit ball of  $\mathbb{R}^n$  ( $n \geq 2$ ). 91j:31003
- Yeh, R. Z. Hyperholomorphic functions and higher order partial differential equations in the plane. 91a:30046
- Zeng, Yue Sheng A note on an integral operator on left- $k$ -monogenic functions. (Chinese. English summary) (Not in MR)
- Zhang, Wan Guo see Xu, Zhen Yuan<sup>1</sup>; et al., 91j:31003

### 30G99 None of the above, but in this section

- Ren, Hong Shan The hyperbolic quasifield of numbers on the plane and analytic functions on it. II. (Chinese) 91a:30047

### Items with secondary classifications in 30G99

- Aragona, J. (with Colombeau, J.-F.) The interpolation theorem for holomorphic generalized functions. 91e:46049
- Baribeau, Line Sur les fonctions analytiques multiformes dont les valeurs sont des segments. (English summary) [Multivalued analytic functions whose values are segments] 91b:47003
- Colombeau, J.-F. see Aragona, J., 91e:46049
- Feneyrol-Perrin, Yvette Transformations conformes dans les corps hédériques. (English summary) [Conformal transforms in hederic fields] 91c:12006
- Heersink, Rudolf (with Tutschke, Wolfgang) Properties of Bauer, Bergman and Vekua operators for elliptic differential equations with complex coefficients. 91f:35064
- Kartasheva, L. V. (with Rogozhin, V. S.) The Riemann boundary value problem in the space of generalized functions  $S'_{n,n}$  on a segment of the real axis. (Russian) (Not in MR)
- Penchanskii, S. B. see Stefmashuk, N. T., 91c:35059
- Rogozhin, V. S. see Kartasheva, L. V., (Not in MR)
- Stefmashuk, N. T. (with Penchanskii, S. B.) Solution of a linear partial differential system by the methods of  $F$ -monogenic functions. (Russian) 91c:35059
- Tutschke, Wolfgang see Heersink, Rudolf, 91f:35064

### 30H05 Spaces and algebras of analytic functions [see also 32E25, 46Exx, 46J15]

- Aikawa, Hiroaki (with Hayashi, Nakao; Saitoh, Saburo) Isometrical identities for the Bergman and the Szegő spaces on a sector. 91m:30060
- Hayashi, Mikihiko (with Nakai, Mitsuru) On the Myrberg type phenomenon. 91b:30042
- Hayashi, Nakao see Aikawa, Hiroaki; et al., 91m:30060
- Kumar, Arvind (with Srivastava, G. S.) Bases in the space of entire Dirichlet series of slow growth. 91b:30071
- Nakai, Mitsuru see Hayashi, Mikihiko, 91b:30042

- Prada, J. Operators in spaces of formal power series. (Spanish) (see 91m:00014)  
 Saitoh, Saburo. *see* Aikawa, Hiroaki; et al. 91m:30060  
 Srivastava, G. S. *see* Kumar, Arvind. 91h:30071  
 Stroethoff, Karel. Nevanlinna-type characterizations for the Bloch space and related spaces. 91k:30097

Items with secondary classifications in 30H05

- Aleksandrov, A. B. Inner functions and related spaces of pseudocontinuous functions. (Russian. English summary) 91c:30063  
 Anderson, James Milne (with Duncan, John). Duals of Banach spaces of entire functions. 91f:46034  
 Arzay, Jonathan (with Fisher, Stephen D.; Janson, Svante; Peetre, Jaak). An identity for reproducing kernels in a planar domain and Hilbert-Schmidt Hankel operators. 91b:47050  
 Bourdon, Paul S. (with Shapiro, Joel H.). Cyclic composition operators on  $H^2$ . 91h:47028  
 — (with Shapiro, Joel H.). Spectral synthesis and common cyclic vectors. 91m:47039  
 Budde, Paul. Support sets and Gleason parts. 91h:46096  
 Cho, Yong (with Kim, Yong Chan). Hadamard products of Bloch functions and its dual spaces. 91g:30002  
 Clancey, Kevin F. The geometry of representing measures and their critical values. 91g:46058  
 Cowen, Carl C. Composition operators on Hilbert spaces of analytic functions: a status report. 91m:47043  
 Duncan, John. *see* Anderson, James Milne. 91f:46034  
 Dzhrbashyan, A. E. (with Shamoyan, F. A.). Topics in the theory of  $A_p^0$  spaces. 91k:46019  
 Feinstein, J. F. Weak ( $F$ )-amenability of  $R(X)$ . 91h:46092  
 Fisher, Stephen D. *see* Arzay, Jonathan; et al. 91b:47050  
 Gasparyan, A. V. *see* Shamoyan, F. A. (Not in MR)  
 Gorina, O. V. An infinite-order differential operator in spaces of analytic functions with given growth. (Russian) 91h:47106  
 — Epimorphicity of a convolution in a space of analytic functions with a given order of growth. (Russian) (see 91j:00017)  
 — A differential operator with constant coefficients in spaces of analytic functions of given growth. (Russian) 91h:47040  
 Gáljarro Carranza, Piedad. Gorny-Cartan inequalities in normed spaces. (Spanish. English summary) 91c:30077  
 Guillory, Carroll. A characterization of a sparse Blaschke product. 91h:46047  
 Guyker, James. The de Branges-Rovnyak model. 91h:47009  
 He, Yu Zan (with Ouyang, Cai Heng). A class of function spaces. 91a:30035  
 Hedemalm, Håkan (with Shields, Allen Lowell). Invariant subspaces in Banach spaces of analytic functions. 91g:46059  
 Imchi, Keiji. Interpolating sequences in a homeomorphic part of  $H^\infty$ . 91h:46056  
 Janson, Svante. *see* Arzay, Jonathan; et al. 91b:47050  
 Jevtić, Miroslav. On Blaschke products in Besov spaces. 91c:30062  
 — (with Pavlović, Miroslav). On multipliers from  $H^p$  to  $H^q$ ,  $0 < q < p < 1$ . 91h:42019  
 Kim, Yong Chan. *see* Cho, Yong. 91g:30002  
 Kislyakov, S. V. Proper uniform algebras are uncomplemented. (Russian) 91e:46065  
 Korenblum, Boris. Unimodular Möbius-invariant contractive divisors for the Bergman space. 91h:46042  
 Korobelnik, Yu. F. Maximal and  $\gamma$ -sufficient sets. Applications to entire functions. I. (Russian) 91k:30081  
 Krasichkov-Ternovskii, I. F. (with Shishkin, A. B.). Spectral synthesis for the multiple differentiation operator. 91h:46046  
 Kryazhin, Yu. V. Growth of norms of fractional derivatives in the Hardy classes. (Russian) (see 91j:00017)  
 Lincuk, S. S. Diagonal operators in spaces of analytic functions and their applications. (Russian) 91h:47069  
 Letta, Benjamin A. Inner multipliers of de Branges's spaces. 91g:46032  
 Momm, Siegfried. Complemented ideals in weighted algebras of analytic functions on the disc. 91j:46060  
 — Linear topological invariants and splitting of closed ideals in weighted algebras of analytic functions on the disc. 91j:46061  
 Mortini, Raymond. Countably generated prime ideals in algebras of analytic functions. 91h:46098  
 Mustafa, R. F. Spectral synthesis in a space of entire functions of bounded growth. (Russian) 91b:47071  
 Nandakumar, N. R. Ring homomorphisms on  $H(G)$ . 91d:46065  
 Nikol'skii, N. K. Elementary description of the methods of localizing ideals. (Russian. English summary) 91h:46059  
 Ouyang, Cai Heng. *see* He, Yu Zan. 91a:30035  
 Pavlović, Miroslav. *see* Jevtić, Miroslav. 91h:42019  
 Peetre, Jaak. *see* Arzay, Jonathan; et al. 91b:47050  
 Savel'ev, V. A. Normal solvability, in some spaces of entire functions, of the operator of multiplication by a function. 91h:47075  
 Shamoyan, F. A. (with Gasparyan, A. V.). Completeness of systems of simple fractions with fixed poles in spaces of holomorphic functions that are smooth up to the boundary. (Russian. Armenian summary) (Not in MR)  
 — *see also* Dzhrbashyan, A. E. 91k:46019  
 Shapiro, Joel H. *see* Bourdon, Paul S. 91h:47028 and 91m:47039  
 Shields, Allen Lowell. *see* Hedemalm, Håkan. 91g:46059  
 Shishkin, A. B. *see* Krasichkov-Ternovskii, I. F. 91h:46046  
 Srivastava, Rajiv K. Functional analytic structures for various classes of entire Dirichlet series with variable sequences of exponents. 91m:46082  
 Timoney, Richard M. Natural function spaces. 91m:46034  
 Vakarchuk, S. B. Widths of certain classes of functions that are analytic in the unit disk. I. 91j:41037  
 — Widths of certain classes of functions that are analytic in a unit disk. II. 91j:41038  
 Wang, Jian. On finitely-generated closed ideals of  $H^\infty$ . (Chinese. English summary) 91g:46061  
 Xiao, Jian Bin. Derivatives of  $A^p$  functions. (Chinese) 91a:46028

- Xiao, Zhi Jing. Weighted Bergman spaces, Bloch space and Ding space. 91f:47045  
 Zabellonis, Algirdas. Embedding of Bergman spaces. (Russian) (see 91j:00017)  
 Zorboska, Nina. Composition operators on  $S_0$  spaces. 91k:47070

## 31-XX Potential theory {For probabilistic potential theory, see 60J45.}

### 31-02 Research exposition (monographs, survey articles)

- Berg, Christian. Lectures on Fourier analysis and potential theory. (see 91b:31001)  
 Hayman, W. K. ★ Subharmonic functions. Vol. 2. 91f:31001  
 Hyvärinen, Jaakko. Classical potential theory. (see 91b:31001)  
 (Laine, Ilpo) *see* School: Potential Theory. 91b:31001  
 Martio, Olli. Nonlinear potential theory. (see 91b:31001)  
 — *see also* School: Potential Theory. 91b:31001

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- Joensuu ★ Summer School in Potential Theory. 91b:31001  
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Potential Theory ★ Summer School in Potential Theory. 91b:31001

Items with secondary classifications in 31-02

- Fabrikant, V. I. ★ Applications of potential theory in mechanics. 91g:73013

### 31-03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 31-03

- Archibald, Thomas. Physics as a constraint on mathematical research: the case of potential theory and electrodynamics. 91f:01007  
 — Connectivity and smoke-rings: Green's second identity in its first fifty years. 91h:01039

### 31-06 Proceedings, conferences, collections, etc.

- (Hirsch, Francis) *see* Seminar: Potential Theory. 91a:31001  
 (Maksbodzik, G.) *see* Seminar: Potential Theory. 91a:31001

Items listed otherwise than by author

- Lecture Notes in Mathematics ★ Séminaire de Théorie du Potentiel, Paris. No. 8. (French) [Seminar on Potential Theory, Paris. No. 8] 91a:31001  
 Seminar:

Potential Theory ★ Séminaire de Théorie du Potentiel, Paris. No. 8. (French) [Seminar on Potential Theory, Paris. No. 8] 91a:31001

## 31Axx Two-dimensional theory

### 31A05 Harmonic, subharmonic, superharmonic functions

- Berman, Robert D. Generalized derivatives and the radial growth of positive harmonic functions. 91g:31001  
 Grishin, A. F. First-order functions that are subharmonic in a half-plane, and a Tauberian theorem. (Russian) 91j:31001  
 Mader, C. (with Pagani, C. D.). Best estimates in the extrapolation problem for harmonic functions. 91c:31001  
 Madrahimov, R. M. *see* Sadullaev, A. 91c:31002  
 Maimenskul, V. V. Estimates for the growth of conjugate harmonic polynomials in domains of the complex plane. 91h:31001  
 Maksimov, V. I. Constructive description of classes of harmonic functions with singularities on continua without zero exterior angles. 91a:31002  
 Pagani, C. D. *see* Mader, C. 91c:31001  
 Rakhovskii, A. Yu. Theorems on the compactness of families of subharmonic functions, and majorants of harmonic measures. 91k:31001  
 Sadullaev, A. (with Madrahimov, R. M.). Smoothness of subharmonic functions. 91c:31002  
 Wojcicka, Ewa. Subharmonic functions in  $n$ -connected domains. 91h:31002  
 Xiao, Jian Bin. Some properties of conjugate functions. 91c:31003
- Items with secondary classifications in 31A05
- Ancona, Alano (with Zinsmeister, Michel). Fonctions harmoniques positives et compacts de petites dimensions. (English summary) [Positive harmonic functions and small-dimensional compacts] 91c:31008  
 Axler, Sheldon (with Shields, Allen Lowell). Extensions of harmonic and analytic functions. 91h:30056  
 Bonsall, F. F. A new proof of Garnett's theorem on harmonic interpolation. 91g:30042  
 Cima, Joseph A. (with Livingston, Albert E.). Integral smoothness properties of some harmonic mappings. 91f:30031  
 Fuglede, Bent. On the mean value property of finely harmonic and finely superharmonic functions. 91c:31028  
 Hayashi, Mikihiro (with Nakai, Mitsuru). On the Myrberg type phenomenon. 91h:30042  
 Hayman, W. K. ★ Subharmonic functions. Vol. 2. 91f:31001  
 Livingston, Albert E. *see* Cima, Joseph A. 91f:30031

- Masumoto, Makoto A distortion theorem for conformal mappings with an application to subharmonic functions. 91h:30037
- Nakai, Mitsuru *see* Hayashi, Mikihiko, 91h:30042
- Schober, Glenn Planar harmonic mappings. 91h:30029
- Shields, Allen Lowell *see* Axler, Sheldon, 91h:30056
- Stanton, Charles S. Isoperimetric inequalities and  $H^p$  estimates. 91g:30039
- Vlasov, V. I. ★ Методы решения краевых задач и асимптотики решений при сингулярном деформировании области. (Russian) [Methods for solving boundary value problems and the asymptotic behavior of solutions in the case of the singular deformation of the domain] 91a:30040
- Zabolotskii, N. V. Asymptotic behavior of  $\delta$ -subharmonic functions of order zero. 91c:30060
- Zinsmeister, Michel *see* Ancona, Alano, 91e:31008

### 31A10 Integral representations, integral operators, integral equations methods

- Bonsall, F. F. Some dual aspects of the Poisson kernel. 91e:31004
- Minda, David The Dirichlet problem for a disk. 91e:31005
- Volokhin, V. A. Approximation of the Poisson integral and of potentials. (Russian) (*see* 91b:34004)

Items with secondary classifications in 31A10

- Atkinson, Kendall E. (with Sloan, Ian H.) The numerical solution of first-kind logarithmic-kernel integral equations on smooth open arcs. 91j:65192
- Brodskiĭ, M. A. (with Panakhov, E.) Concerning a priori estimates of the solution of the inverse logarithmic potential problem. 91h:31005
- Chegis, I. A. An algorithm for the numerical solution of an integral equation for the density of a simple layer potential. 91g:65299
- Grishin, A. F. First-order functions that are subharmonic in a half-plane, and a Tauberian theorem. (Russian) 91j:31001
- Kress, Rainer A Nyström method for boundary integral equations in domains with corners. 91m:65329
- Mok, Yu. I. Special integral equations of potential theory. 91g:65310
- Panakhov, E. *see* Brodskiĭ, M. A., 91h:31005
- Sloan, Ian H. *see* Atkinson, Kendall E., 91j:65192

### 31A15 Potentials and capacity, harmonic measure, extremal length [see also 30C85]

- Burdy, Krzysztof (with Pitman, Jim W.; Yor, Marc) Brownian crossings between spheres. 91h:31003
- Fuglede, Bent A simple proof that certain capacities decrease under contraction. 91b:31002
- Kolsrud, Torbjörn Traces of harmonic functions, capacities, and traces of symmetric Markov processes. 91h:31001
- Mityuk, I. P. A lower bound on the sum of condenser capacities. 91c:31001
- Murai, Takafumi The power  $3/2$  appearing in the estimate of analytic capacity. 91e:31006
- Pitman, Jim W. *see* Burdy, Krzysztof; et al., 91h:31003
- Seifullaev, R. K. Estimates for the moduli of continuity of the heat potential of a double layer. (Russian) (*see* 91a:45007)
- Volberg, A. L. A criterion on a subdomain of the disc for its harmonic measure to be comparable with Lebesgue measure. 91h:31004
- Yor, Marc *see* Burdy, Krzysztof; et al., 91h:31003

Items with secondary classifications in 31A15

- Gonchar, A. A. (with Rakhmanov, E. A.) On the rate of rational approximation of analytic functions. 91b:30116
- Ishida, Hisashi Harmonic Dirichlet functions and the components of harmonic boundaries of Riemann surfaces. 91e:30073
- Jenkins, James A. Some estimates for harmonic measures. II. 91f:30030
- Jones, Peter Wilcox Square functions, Cauchy integrals, analytic capacity, and harmonic measure. 91h:42032
- Kud'yarov, V. S. A characteristic property of a class of planar topological mappings. (Russian. English summary) 91g:30026
- Mhaskar, H. N. Weighted polynomials, radial basis functions and potentials on locally compact spaces. 91m:41039
- Rakhmanov, E. A. *see* Gonchar, A. A., 91b:30116
- Shlyk, V. A. Erratum: "The method of conjugate families in the theory of moduli". (Russian) 91k:31007b
- The method of conjugate families in the theory of moduli. 91k:31007a
- Yin, Yong Cheng Capacities of Julia sets of rational functions. 91h:30039
- Zdunik, Anna Harmonic measure versus Hausdorff measures on repellers for holomorphic maps. 91k:58071

### 31A20 Boundary behavior (theorems of Fatou type, etc.)

- Yamashita, Shinji Growth properties of subharmonic functions in the unit disk. 91h:31003

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- Brossard, Jean (with Chevalier, Lucien) Problème de Fatou ponctuel et dérivabilité des mesures. [Pointwise Fatou problem and differentiability of measures] 91e:31013
- Carmona, J. J. (with Cufi, J.; Pommerenke, Ch.) On the angular boundedness of Bloch functions. 91m:30043
- Chevalier, Lucien *see* Brossard, Jean, 91e:31013
- Cufi, J. *see* Carmona, J. J.; et al., 91m:30043
- Pommerenke, Ch. *see* Carmona, J. J.; et al., 91m:30043
- Roth, Jean-Pierre Théorèmes de convergence presque-partout. (English summary) [Theorems of almost-everywhere convergence] 91k:28022

### 31A25 Boundary value and inverse problems

- Astala, Kari Calderón's problem for Lipschitz classes and the dimension of quasicircles. 91g:31002
- Beretta, Elena (with Vessella, Sergio) Stability results for an inverse problem in potential theory. (Italian summary) 91j:31002
- Birolli, Marco (with Vitali, Enrico) Regular and Wiener points for the relaxed Dirichlet problem for the bi-Laplacian. (Italian summary) 91h:31004
- Brodskiĭ, M. A. (with Panakhov, E.) Concerning a priori estimates of the solution of the inverse logarithmic potential problem. 91h:31005
- Kawamura, Michihiko A note on Picard principle for rotationally invariant density. 91e:31007
- Margulis, A. S. Equivalence and uniqueness in an inverse problem of potential for homogeneous star-shaped bodies. (Russian) 91k:31002
- Mikhalyuk, M. I. (with Parasyuk, E. M.) The second variation of a functional of an inverse problem of a logarithmic potential. (Ukrainian. Russian summary) (Not in MR)
- The unique solution of an inverse problem of a logarithmic potential for constant density. (Ukrainian. Russian summary) (Not in MR)
- Nersisyan, A. B. (with Sugyan, K. A.) Solution of the Dirichlet problem for the Laplace equation in a domain bounded by a lemniscate. (Russian. Armenian summary) (Not in MR)
- Panakhov, E. *see* Brodskiĭ, M. A., 91h:31005
- Parasyuk, E. M. *see* Mikhalyuk, M. I., (Not in MR)
- Shirokova, E. A. An interior inverse boundary value problem with respect to parameter  $s$  for the Beltrami equation that is given in the plane of the domain sought. (Russian) 91m:31001
- Sugyan, K. A. *see* Nersisyan, A. B., (Not in MR)
- Tsot, Sun Bon A problem for harmonic functions with boundary values of a higher-order normal derivative. (Russian) 91f:31002
- Vessella, Sergio *see* Beretta, Elena, 91j:31002
- Vitali, Enrico *see* Birolli, Marco, 91h:31004
- Xia, Wei Ci The solution of a Dirichlet problem and a related class of complex functions. (Chinese. English summary) 91a:31003
- Zelenkov, G. A. A Dirichlet problem on a half-plane that has solutions of not completely regular growth. (Russian) 91b:31005

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- Busurulov, A. A. Application of the method of  $p$ -harmonic functions to the solution of boundary value problems. (Russian) (*see* 91b:00029)
- Curtis, Edward B. (with Morrow, James A.) Determining the resistors in a network. 91h:94036
- Eidel'man, S. D. *see* Firdman, A. I., 91c:35047
- Firdman, A. I. (with Eidel'man, S. D.) Uniqueness of the solution of boundary value problems for the biharmonic equation. 91c:35047
- Kapanadze, D. V. Uniqueness of the solution of an inverse problem in potential theory. (Russian. English and Georgian summaries) 91k:86006
- Minotti, Fernando (with Moreno, Carlos) Solution of Laplace's equation in plane single-connected regions bounded by arbitrary single curves. 91g:35059
- Moreno, Carlos *see* Minotti, Fernando, 91g:35059
- Morrow, James A. *see* Curtis, Edward B., 91h:94036
- Paquet, Luc Solutions du problème de Dirichlet sous forme d'un potentiel de simple couche. (English summary) [Solutions of the Dirichlet problem by means of a single-layer potential] 91m:65303
- Rakhimov, R. M. Direct and inverse estimates for the logarithmic potential of a double layer near the boundary. (Russian. Tajiki summary) 91a:30038
- Zidarov, D. P. Computable object functions and models used in inverse potential field problems. 91m:65316

### 31A30 Biharmonic, polyharmonic functions and equations, Poisson's equation

- Busurulov, A. A. Application of the method of  $p$ -harmonic functions to the solution of boundary value problems. (Russian) (*see* 91b:00029)
- Cheng, Jin<sup>2</sup> *see* Xu, Zhen Yuan<sup>1</sup>; et al., 91j:31003
- Xu, Zhen Yuan<sup>1</sup> (with Cheng, Jin<sup>2</sup>; Zhang, Wan Guo) A harmonic conjugate of the Poisson kernel and a boundary value problem for monogenic functions in the unit ball of  $\mathbb{R}^n$  ( $n \geq 2$ ). 91j:31003
- Zhang, Wan Guo *see* Xu, Zhen Yuan<sup>1</sup>; et al., 91j:31003

Items with secondary classifications in 31A30

- Birolli, Marco (with Vitali, Enrico) Regular and Wiener points for the relaxed Dirichlet problem for the bi-Laplacian. (Italian summary) 91h:31004
- Eidel'man, S. D. *see* Firdman, A. I., 91c:35047
- Firdman, A. I. (with Eidel'man, S. D.) Uniqueness of the solution of boundary value problems for the biharmonic equation. 91c:35047
- Kelmanson, Mark A. On the solution structure of a nonlinear transcendental eigenvalue equation. 91c:35112
- Tang, Yun Problems of the motion of rotating vortices in two-dimensional incompressible fluids. (Chinese) 91f:76012
- Vitali, Enrico *see* Birolli, Marco, 91h:31004

### 31A35 Connections with differential equations

- Grecea, Valentin Some properties of the minimum principle in the plane. (Romanian. English summary) 91k:31002

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- Alessandrini, Giovanni Isoperimetric inequalities for the length of level lines of solutions of quasilinear capacity problems in the plane. 91h:35037
- Athanassoulis, G. A. (with Politis, C. G.) On the solvability of a two-dimensional wave-body interaction problem. 91h:35260



- Hilbert, Martin Stability for an interface problem on  $\mathbb{R}^2$ . 91j:35289
- Kelmanson, Mark A. On the solution structure of a nonlinear transcendental eigenvalue equation. 91c:35112
- Lagan, B. F. The recovery of orthogonal polynomials from a sum of squares. 91b:42042
- Makarov, S. E. Mean integral relations for a second-order metaharmonic equation. (Russian) 91b:65008
- Nersisyan, A. B. (with Sugyan, K. A.) Solution of the Dirichlet problem for the Laplace equation in a domain bounded by a lemniscate. (Russian. Armenian summary) (Not in MR)
- Politis, C. G. see Athanassoulis, G. A., 91h:35260
- Sugyan, K. A. see Nersisyan, A. B., (Not in MR)

### 31A99 None of the above, but in this section

Items with secondary classifications in 31A99

- Levin, B. Ya. Completeness of systems of functions, quasi-analyticity and subharmonic majorants. (Russian. English summary) 91g:46045
- Schiff, J. L. (with Walker, W. J.) A Bieberbach condition for a class of pseudo-analytic functions. 91c:30093
- Walker, W. J. see Schiff, J. L., 91c:30093

### 31Bxx Higher-dimensional theory

#### 31B05 Harmonic, subharmonic, superharmonic functions

- Ancena, Alano (with Zinsmeister, Michel) Fonctions harmoniques positives et compacts de petites dimensions. (English summary) [Positive harmonic functions and small-dimensional compacts] 91c:31008
- Armitage, David H. (with Goldstein, Myron) The volume mean-value property of harmonic functions. 91a:31004
- Hyperplane mean values of strongly subharmonic functions. 91c:31009
- (with Goldstein, Myron) Better than uniform approximation on closed sets by harmonic functions with singularities. 91a:31005
- Ashurova, Z. R. A Phragmén-Lindelöf type theorem for harmonic functions in several variables. (Russian) 91i:31003
- Essén, Mats (with Haliste, Kersti) On Beurling's theorem for harmonic measure and the rings of Saturn. 91c:31002
- A generalization of the M. Riesz theorem on conjugate functions and the Zygmund  $L \log L$ -theorem to  $\mathbb{R}^d$ ,  $d \geq 2$ . 91f:31003
- Gardiner, Stephen J. Removable singularities for subharmonic functions. 91k:31003
- Subharmonicity, the distance function, and  $a$ -admissible sets. 91j:31004
- Gay, R. Inversion de la transformation de Pompeiu locale. [Inversion of the local Pompeiu transform] 91f:31004
- Goldstein, Myron see Armitage, David H., 91a:31004 and 91a:31005
- Haliste, Kersti see Essén, Mats, 91c:31002
- Imomkulov, S. A. Separately subharmonic functions. (Russian) 91f:31005
- Kharinson, Dmitry (with Shapiro, Harold S.) Remarks on the reflection principle for harmonic functions. 91h:31004
- Kuran, Ō. On NTA-conical domains. 91i:31004
- Madrahimov, R. M. A test for  $n$ -harmonicity. (Russian) (see 91b:00031)
- Mukhllov, F. G. Representation of  $B$ -superharmonic functions by  $B$ -potentials. (Russian) (see 91j:00017)
- Nguyen Xuan Uy A removable set for Lipschitz harmonic functions. 91b:31007
- Rashkovskii, A. Yu. The order of subharmonic functions in a cone. (Russian) 91j:31005
- (with Ronkin, L. I.) Subharmonic functions of finite order in a cone. I. General theory. (Russian) 91k:31004
- Ronkin, L. I. Subharmonic functions of completely regular growth in a closed cone. 91m:31002
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- Shapiro, Harold S. see Kharinson, Dmitry, 91h:31006
- Suzuki, Noriaki Nonintegrability of harmonic functions in a domain. 91m:31003
- Nonintegrability of superharmonic functions. 91k:31005
- Wu, Jiong Qi Potential theory on harmonic spaces and some of its recent results. (Chinese. English summary) (Not in MR)
- Yanushauskas, A. I. Some special mappings realized by harmonic functions. 91h:31006
- Zeinstra, Rein L. Some properties of positive superharmonic functions. 91j:31006
- Zinsmeister, Michel see Ancena, Alano, 91c:31008

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- Andrievskii, V. V. On the rate of harmonic approximation on compacta in  $\mathbb{R}^2$ . 91e:41018
- Armitage, David H. (with Goldstein, Myron) Better than uniform and  $L^p$  harmonic approximation on unbounded closed sets. (see 91j:41001)
- Coffman, Charles V. (with Cohen, Jonathan) The duals of harmonic Bergman spaces. 91f:46035
- Cohen, Jonathan see Coffman, Charles V., 91f:46035
- Goldstein, Myron see Armitage, David H., (91j:41001)
- Hayman, W. K. ★ Subharmonic functions. Vol. 2. 91f:31001
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- Sadullaev, A. (with Madrahimov, R. M.) Smoothness of subharmonic functions. 91c:31002
- Ton Tran Cong On the potential of a solenoidal vector field. 91e:26015
- Watson, N. A. A convexity theorem for local mean values of subtemperatures. 91b:31012
- A thermic analogue of the fundamental function of the distance. 91b:31013

#### 31B10 Integral representations, integral operators, integral equations methods

- Danilov, L. I. Estimates for the Poisson kernel for a tube domain over an acute cone.

(Russian) (Not in MR)

- Dzhirbashyan, A. E. Integral representations for classes of harmonic vector functions in the unit ball. (Russian. Armenian summary) 91b:31008
- Medková, Dagmar Invariance of the Fredholm radius of the Neumann operator. (Russian and Czech summaries) 91k:31006
- Items with secondary classifications in 31B10
- Grachev, N. V. (with Maz'ya, V. G.) The Fredholm radius of integral operators of potential theory. (Russian) 91j:47057
- Maz'ya, V. G. see Grachev, N. V., 91j:47057
- Rashkovskii, A. Yu. The order of subharmonic functions in a cone. (Russian) 91j:31005
- Rubin, B. S. Difference regularization of operators of potential type in  $L_p$ -spaces. (Russian) 91f:46049

#### 31B15 Potentials and capacities, extremal length

- Aikawa, Hiroaki Comparison of  $L^p$ -capacity and Hausdorff measure. 91i:31005
- Berg, Christian (with Fuglede, Bent) Liouville's operator for a disc in space. 91j:31007
- Efimov, S. P. (with Muratov, R. Z.) Theory of multipole representation of the potentials of an ellipsoid. Tensor potentials. 91h:31007
- (with Muratov, R. Z.) Theory of multipole representation of the potentials of an ellipsoid. Moments. 91h:31008
- Fuglede, Bent see Berg, Christian, 91j:31007
- Ikoma, Kazuo An estimate from below for moduli of rings in  $n$ -space. 91h:31009
- Lewis, John L. Some applications of Riesz capacities. 91b:31009
- Mizuta, Yoshihiro On the existence of spherical limits of Beppo Levi functions. 91f:31006
- Muratov, R. Z. see Efimov, S. P., 91h:31007 and 91h:31008
- Shlyk, V. A. Erratum: "The method of conjugate families in the theory of moduli". (Russian) 91k:31007b
- The method of conjugate families in the theory of moduli. 91k:31007a
- Yamamoto, Hiromichi On weighted extremal length and  $p$ -capacity. 91j:31008
- Zhang, Ling The estimation of capacity. (Chinese. English summary) (Not in MR)
- Zorin, N. V. On Newton's condenser capacities. (Russian) 91j:31009
- A variational problem in theory of the Green potential. I. 91a:31006
- A sharp estimate for a 2-capacity condenser. 91c:31003
- Extremal lengths and Green's condenser capacities. 91c:31010
- Moduli of families of surfaces and Green capacities of condensers. 91c:31011
- On the capacities of condensers. 91j:31010

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- Burdzy, Krzysztof (with Pitman, Jim W.; Yor, Marc) Brownian crossings between spheres. 91h:31003
- Gabidzashvili, M. A. Weighted inequalities for anisotropic potentials. (Russian. English summary) 91c:42025
- Kad'yavin, V. S. A characteristic property of a class of  $n$ -dimensional homeomorphisms. (Russian. English summary) 91g:30027
- Payne, Lawrence E. see Philippin, G. A., 91h:35067
- Philippin, G. A. (with Payne, Lawrence E.) On the conformal capacity problem. 91h:35067
- Pitman, Jim W. see Burdzy, Krzysztof; et al., 91h:31003
- Rashkovskii, A. Yu. (with Ronkin, L. I.) Subharmonic functions of finite order in a cone. I. General theory. (Russian) 91k:31004
- Ronkin, L. I. see Rashkovskii, A. Yu., 91k:31004
- Vodopyanov, S. K. The  $L_p$  potential theory for generalized kernels. (Russian) 91h:46053
- Yor, Marc see Burdzy, Krzysztof; et al., 91h:31003

#### 31B20 Boundary value and inverse problems

- Alessandrini, Giovanni Matzoh ball soup: a symmetry result for the heat equation. 91d:31001
- Hansen, Wolfhard (with Netuka, Ivan) Regularizing sets of irregular points. 91e:31012
- Kilpeläinen, Tero (with Malý, Jan) Generalized Dirichlet problem in nonlinear potential theory. 91b:31010
- Magenes, Enrico On the regular oblique derivative problem for harmonic functions. (Italian. English summary) 91k:31008
- Malý, Jan see Kilpeläinen, Tero, 91b:31010
- Netuka, Ivan see Hansen, Wolfhard, 91e:31012
- Prudnikov, V. Ya. Letter to the editors: "The Dirichlet problem for convex functions" [Izv. Vyssh. Uchebn. Zaved. Mat. 1988, no. 10, 30–33; MR 90c:31012]. (Russian) (Not in MR)
- Yanushauskas, A. I. An integro-differential operator of potential theory. 91c:31004

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- Ashurova, Z. R. A Phragmén-Lindelöf type theorem for harmonic functions in several variables. (Russian) 91i:31003
- Brossard, Jean Effets de bord pour un tambour à bord fractal. [Boundary effects for a drum with a fractal boundary] 91b:58261
- Bryan, Kurt Single measurement detection of a discontinuous conductivity. 91e:78015
- Cheng, Jin² see Xu, Zhen Yuan²; et al., 91j:31003
- Garofalo, Nicola (with Segala, Fausto) New results on the Pompeiu problem. 91h:35322
- Gautsen, A. K. (with Sabina, Federico J.) On the problem of the electrified elliptic disk. 91e:78016
- Kapanadze, D. V. Uniqueness of the solution of an inverse problem in potential theory. (Russian. English and Georgian summaries) 91h:86002
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Strakhov, V. N. Solution of linear inverse problems of gravimetry and magnetometry. (Russian) 91h:86003

Xu, Zhen Yuan<sup>1</sup> (with Cheng, Jin<sup>2</sup>; Zhang, Wan Guo) A harmonic conjugate of the Poisson kernel and a boundary value problem for monogenic functions in the unit ball of  $\mathbb{R}^n$  ( $n \geq 2$ ). 91j:31003

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Dzhvarshvili, I. A. Maximal functions with respect to Brownian motion. (Russian. English and Georgian summaries) 91k:31009

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Li, Fu Xing Boundary behavior of Nevanlinna classes of harmonic functions of several variables. (Chinese. English summary) 91e:31014

Mizuta, Yoshihiro Boundary limits of locally  $n$ -precise functions. 91e:31015

Watson, N. A. Boundary behaviour of harmonic functions and solutions of parabolic systems. 91d:31002

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Beauregard, F. (with Burbea, J.) Sobolev-type imbedding theorems for harmonic Hardy-Sobolev spaces. 91e:46038

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Chevalier, Nicolas Frontière de Martin d'un domaine de  $\mathbb{R}^n$  dont le bord est inclus dans une hypersurface lipschitzienne. [Martin boundary of a domain in  $\mathbb{R}^n$  whose boundary lies in a Lipschitz hypersurface] 91e:31024

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Levenberg, Norman (with Yamaguchi, Hiroshi<sup>1</sup>) The metric induced by the Robin function. 91m:32017

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Morrow, James A. see Curtis, Edward B., 91h:94036

Ryabogin, A. K. A condition for conjugate harmonic functions to belong to the class  $h_p$ . (Russian) 91b:31011

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Swezy, Caroline  $L$ -harmonic functions and the exponential square class. 91k:35072

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### 31B30 Biharmonic and polyharmonic equations and functions

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Karachik, V. V. A class of problems for a polyharmonic equation in a ball. (Russian) 91a:35058

Mizuta, Yoshihiro Integral representations of Beppo Levi functions and the existence of limits at infinity. 91e:46043

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Verchota, Gregory The Dirichlet problem for the polyharmonic equation in Lipschitz domains. 91k:35073

### 31B35 Connections with differential equations

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Kipriyanova, N. I. Estimates for eigenfunctions of a  $B$ -polyharmonic operator. (Russian) (see 91g:35004)

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Nicaise, Serge Approche spectrale des problèmes de diffusion sur les réseaux. [Spectral approach to the study of problems of diffusion over networks] 91g:31003

Ryabogin, A. K. A condition for conjugate harmonic functions to belong to the class  $h_p$ . (Russian) 91b:31011

Shapiro, Harold S. A weighted  $L^1$  estimate for the Laplace operator. 91i:31006

Szeftel, Noriaki Huygens property of parabolic functions and a uniqueness theorem. 91i:31007

Varnhorn, Werner An explicit potential theory for the Stokes resolvent boundary value problems in three dimensions. 91k:31011

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Acker, Andrew The Bernoulli free-boundary problem—uniqueness and elliptic ordering of solutions. 91h:35330

Baderko, E. A. Smoothness of a  $2m$ -parabolic potential of a simple layer. 91g:35129

Bojarski, B. (with Iwaniec, Tadeusz)  $p$ -harmonic equation and quasiregular mappings. 91j:35070

Brummelhuis, R. G. M. A Bochner-Martinelli formula for vector fields which satisfy the generalized Cauchy-Riemann equations. 91f:30072

Brazzina, Miroslav Wiener's test of thinness in potential theory. 91h:31012

Cannon, John R. (with Pérez Esteve, Salvador) Uniqueness and stability of 3D heat sources. 91k:35101

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Costabel, Martin Boundary integral operators for the heat equation. 91j:35119

— (with Stephan, E. P.) Integral equations for transmission problems in linear elasticity. 91g:73021

Dalmasso, Robert Solutions d'équations biharmoniques sur-linéaires. (English summary) [Solutions of superlinear biharmonic equations] 91j:35018

Duplantier, Bertrand Exact curvature energies of charged membranes of arbitrary shapes. 91h:78012

Ersoy, Nuri (with Çelebi, A. Okay) On a class of hyperbolic differential equations. 91k:35146

Fabes, Eugene B. (with Garofalo, Nicola; Marin-Malave, S.; Salsa, S.) A Fatou theorem for the  $p$ -Laplacian. 91j:35112

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Goyal, Sulbha (with Goyal, Vinod B.) Liouville-type and uniqueness results for a class of elliptic equations. 91f:35090

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Grigor'ev, Yu. A. Determining a harmonic function with minimal deviation of the gradient. (Russian) 91g:35075

Grubb, Gerd Solution dans les espaces de Sobolev  $L_p$  anisotropes des problèmes aux limites pseudo-différentiels paraboliques et des problèmes de Stokes. (English summary) [Solution in anisotropic Sobolev  $L_p$ -spaces of parabolic pseudodifferential boundary value problems and Stokes problems] 91j:35219

Gustafsson, Björn A note on an identification problem in potential theory. (see 91g:00044)

Hoh, Walter (with Jacob, Niels) Quelques remarques sur la théorie du potentiel de l'équation de A. N. Kolmogorov. (English summary) [Some remarks on the potential theory of the Kolmogorov equation] 91c:35039

Ilnskii, A. S. (with Mikheev, A. G.) Diffraction of a wave by a periodic reflecting surface. (Russian) 91j:35048

Iwaniec, Tadeusz (with Manfredi, Juan J.) Regularity of  $p$ -harmonic functions on the plane. 91j:35071

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Kusano, Takasi (with Swanson, Charles A.) Entire solutions of real and complex Monge-Ampère equations. 91j:32016

Ling, Ling Properties of solutions to ultrahyperbolic equations and the Dirichlet problem. (Chinese) 91j:35162

Lumer, Gunter Principes du maximum paraboliques pour des domaines  $(x, t)$  non-cylindriques. [Parabolic maximum principles for noncylindrical domains  $(x, t)$ ] 91f:35055

Maeda, Fumi-Yuki Martin boundary of a harmonic space with adjoint structure and its applications. 91k:31012

Magenes, Enrico On the regular oblique derivative problem for harmonic functions. (Italian. English summary) 91k:31008

Mamedov, F. I. Theorems of Phragmén-Lindelöf type for second-order linear elliptic equations of divergence type with a positive right-hand side. 91j:35054

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Martin, Olli Harmonic measures for second order nonlinear partial differential equations. 91f:35102

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Movchan, A. B. Polarization and Wiener capacity matrices for an operator in elasticity theory in doubly connected domains. (Russian) 91h:73009

Novruzov, A. A. (with Mamedov, F. O.) Sub- and supersolutions of parabolic operators of potential type. (Russian. English and Azerbaijani summaries) 91k:35088

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Picard, Rainer H. Some decomposition theorems and their application to nonlinear potential theory and Hodge theory. 91h:58004

Robbiano, Luc (with Salazar, Jorge) Dimension de Hausdorff et capacité des points singuliers d'une solution d'un opérateur elliptique. (English summary) [Hausdorff dimension and capacity of the singular points of a solution of an elliptic operator] 91g:35084

Salazar, Jorge see Robbiano, Luc, 91g:35084

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Simonov, N. A. Random estimates for derivatives from a solution of the Neumann problem near the boundary of a domain. (Russian) 91h:65009

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Strakhov, V. N. Explicit analytic representations of solutions of linear inverse problems of gravimetry and magnetometry with continual data. (Russian) 91h:86004

Swanson, Charles A. see Kusano, Takasi, 91j:32016

Tanaka, Hiroshi<sup>1</sup> Harmonic boundaries of Riemannian manifolds. 91f:31008

Verchota, Gregory The Dirichlet problem for the polyharmonic equation in Lipschitz domains. 91k:35073

Zhao, Zhong Xin Gaugeability for unbounded domains. 91e:60098

### 31B99 None of the above, but in this section

Kondratyuk, A. A. An application of a spherical star-function. (Russian) (see 91j:00017)

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**Bouleau, Nicolas** Énergie locale et densité de temps d'occupation. [Local energy and occupation density] 91c:31007

### 31Cxx Other generalizations

#### 31C05 Harmonic, subharmonic, superharmonic functions

**Khelifi, A. I.** Canonical representations of generalized subharmonic functions. (Russian) 91m:31004

**Levin, B. Ya.** (with Logvinenko, V. N.) Classes of functions that are subharmonic in  $\mathbb{R}^m$  and bounded on certain sets. (Russian. English summary) 91c:31017

**Lindqvist, Peter** Phragmén-Lindelöf's theorem. (see 91b:31001)

**Logvinenko, V. N.** see Levin, B. Ya., 91c:31017

**Watson, N. A.** A convexity theorem for local mean values of subtemperatures. 91b:31012

— A thermic analogue of the fundamental function of the distance. 91b:31013

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**Dineen, Seán** ★ The Schwarz lemma. 91f:46064

(Laine, Ilpo) see School: Potential Theory, 91b:31001

**Liao, Ming** see Wu, Rong, 91f:60129

(Martio, Olli) see School: Potential Theory, 91b:31001

**Masaka, Hiroaki** On the behavior of nonnegative finely superharmonic functions at the Martin boundary. 91c:31013

**Wu, Rong** (with Liao, Ming) Remarks on harmonic functions and invariant measures of Markov processes. 91f:60129

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**Joensuu** ★ Summer School in Potential Theory. 91b:31001

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Potential Theory ★ Summer School in Potential Theory. 91b:31001

#### 31C10 Pluriharmonic and plurisubharmonic functions [see also 32F05]

**Khudatberdiyev, V. N.** A transvector algebra for equations that describe pluriharmonic functions. (Russian) (see 91j:00010)

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**Demailly, Jean-Pierre** Fonction de Green pluricomplexe et mesures pluriharmoniques. [Pluricomplex Green functions and pluriharmonic measures] 91a:32020

**Khusanov, Z. Kh.** Capacity properties of  $q$ -subharmonic functions. I. (Russian. Uzbek summary) 91b:32011

**Lelong, Pierre** Fonctions plurisubharmoniques de croissance logarithmique; extension du résultat des polynômes. (English summary) [Plurisubharmonic functions with logarithmic growth; extension of the resultant of polynomials] 91c:32012

#### 31C12 Potential theory on Riemannian manifolds [see also 53C20; for Hodge theory, see 58A14]

**Tanaka, Hiroshi** Harmonic boundaries of Riemannian manifolds. 91f:31008

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**Arai, Hiroshi** Boundary behavior of functions on complete manifolds of negative curvature. 91c:53037

**Holopainen, Ilkka** Nonlinear potential theory and quasiregular mappings on Riemannian manifolds. 91c:31029

**Tam, Luen-Fai** On polynomial growth harmonic functions and holomorphic functions on manifolds. 91d:58262

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**Bloom, Walter R.** (with Heyer, Herbert) Characterisation of potential kernels of transient convolution semigroups on a commutative hypergroup. 91c:31018

**Heinonen, Juha** (with Kilpeläinen, Tero; Malý, Jan) Connectedness in fine topologies. 91c:31005

**Heyer, Herbert** see Bloom, Walter R., 91c:31018

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**Kilpeläinen, Tero** see Heinonen, Juha; et al., 91c:31005

**de La Pradelle, Arnaud** Sur la subordination des résolvantes. [On the subordination of resolvents] 91c:31019

— Résolvantes complexes et potentiels intrinsèques. [Complex resolvents and intrinsic potentials] 91c:31020

**Maagli, Habib** Représentation intégrale des potentiels. [Integral representation of potentials] 91c:31021

**Malý, Jan** see Heinonen, Juha; et al., 91c:31005

**Negrini, Paolo** Some remarks on capacity and the Wiener test for degenerate elliptic operators. (Italian summary) 91c:31006

**Selmi, Mohamed** Critère de comparaison de certains noyaux de Green. [A criterion for comparing some Green kernels] 91c:31022

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**Bouleau, Nicolas** (with Hirsch, Francis) Quasi-everywhere regularity of solutions of Brownian stochastic differential equations and their flows. (French summary) 91f:60128

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**Hamann, Uwe** Approximation durch Lösungen elliptischer Randwertprobleme auf kompakten Mengen mit leerem Inneren. [Approximation by solutions of elliptic boundary value problems on compact sets with empty interior] 91d:35065

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**Khusanov, Z. Kh.** Capacity properties of  $q$ -subharmonic functions. I. (Russian. Uzbek summary) 91b:32011

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**Netrusov, Yu. V.** Sets of singularities of functions in spaces of Besov and Lizorkin-Triebel type. (Russian) 91a:46032

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**Perkins, Edwin A.** Polar sets and multiple points for super-Brownian motion. 91f:60109

**Rumely, Robert S.** ★ Capacity theory on algebraic curves. 91b:14018

**Segala, Fausto** see Garofalo, Nicola, 91k:35138

**Yan, Jia An** (with Zhang, Tu Sheng) Dirichlet forms and potential theory of symmetric Hunt processes. 91j:60128

**Zhang, Tu Sheng** see Yan, Jia An, 91j:60128

**Zoril, N. V.** Extremal lengths and Green's condenser capacities. 91c:31010

#### 31C20 Discrete potential theory and numerical methods

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**Zoril, N. V.** Discrete characteristics of space condensers. (Russian) 91b:31014

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#### 31C25 Dirichlet spaces

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**Bouleau, Nicolas** Énergie locale et densité de temps d'occupation. [Local energy and occupation density] 91c:31007

— Autour de la variance comme forme de Dirichlet: filtrations et résolutions de l'identité, contractions et BMO, espérances conditionnelles et principe complet du maximum. (English summary) [Variance as a Dirichlet form: filtrations and resolutions of the identity, contractions and BMO, conditional expectations and the complete maximum principle] 91g:31004

**Iscove, L.** (with McDonald, David R.) Induced Dirichlet forms and capacity inequalities. 91c:31008

**McDonald, David R.** see Iscove, L., 91c:31008

**Röckner, Michael** see Albeverio, Sergio, 91c:31023

**Tomisaki, Matsuyo** Comparison theorems on Dirichlet norms and their applications. 91c:31009

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**Bouleau, Nicolas** (with Hirsch, Francis) Algèbre des structures de Dirichlet. (English summary) [The algebra of Dirichlet structures] 91a:46034

**Hirsch, Francis** see Bouleau, Nicolas, 91a:46034

**Li, Peter** Harmonic maps of complete manifolds. 91e:58050

**Lyons, T. J.** (with Zheng, Wei An) Diffusion processes with nonsmooth diffusion coefficients and their density functions. 91m:60147

**Okura, Hiroyuki** Recurrence criteria for skew products of symmetric Markov processes. 91a:60194

**Röckner, Michael** see Albeverio, Sergio, 91g:47030

**Takeda, Masayoshi** On a martingale method for symmetric diffusion processes and its applications. 91d:60193

**Yan, Jia An** (with Zhang, Tu Sheng) Dirichlet forms and potential theory of symmetric Hunt processes. 91j:60128

**Zhang, Tu Sheng** see Yan, Jia An, 91j:60128

**Zheng, Wei An** see Lyons, T. J., 91m:60147

#### 31C35 Martin boundary theory [see also 60J50]

**Chevallier, Nicolas** Frontière de Martin d'un domaine de  $\mathbb{R}^n$  dont le bord est inclus dans une hypersurface lipschitzienne. [Martin boundary of a domain in  $\mathbb{R}^n$  whose boundary lies in a Lipschitz hypersurface] 91c:31024

**Gardiner, Stephen J.** The Martin boundary of NTA strips. 91c:31025

**Kargaev, P. P.** The Martin boundary of a two-dimensional domain whose complement is situated on a straight line. 91c:31008

**Maeda, Fumi-Yuki** Martin boundary of a harmonic space with adjoint structure and its applications. 91k:31012

**Masaka, Hiroaki** On the behavior of nonnegative finely superharmonic functions at the Martin boundary. 91k:31013

**Murata, Minoru** Martin compactification and asymptotics of Green functions for Schrödinger operators with anisotropic potentials. 91m:31006

**Tada, Toshimasa** A note on Martin boundary of angular regions for Schrödinger equations. 91c:31026

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**Dinu, Liviu** Some remarks concerning the Riemann invariance. Burnat-Peradzyński and Martin approaches. 91k:35197

**Segawa, Shigeo** Martin boundaries of Denjoy domains and quasiconformal mappings. 91j:30034

**Tada, Toshimasa** Nonmonotonicity [nonmonotonicity] of Picard principle for Schrödinger operators. 91d:35060



Woes, Wolfgang Boundaries of random walks on graphs and groups with infinitely many ends. 91e:60222

### 31C40 Fine potential theory

Frolík, Zdeněk (with Netuka, Ivan) Čech completeness and fine topologies in potential theory and real analysis. 91e:31027

Fuglede, Bent On the mean value property of finely harmonic and finely superharmonic functions. 91e:31028

Heinonen, Juha (with Kilpeläinen, Tero; Martio, Olli) Fine topology and quasilinear elliptic equations. (French summary) 91b:31015

Kigami, Jun A harmonic calculus on the Sierpiński spaces. 91g:31005

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Kolsrud, Torbjörn Stochastic boundary representation in the fine topology of a symmetric diffusion. (French summary) 91d:60181

Masaka, Hiroaki On the behavior of nonnegative finely superharmonic functions at the Martin boundary. 91k:31013

### 31C45 Other generalizations (nonlinear potential theory, etc.)

Aronsson, Gunnar Representation of a  $p$ -harmonic function near a critical point in the plane. 91c:31009

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Kaali, Ernst Potential theory on curves. 91e:14020

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Salsa, S. see Fabes, Eugene B.; et al., 91e:35092

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### 31C99 None of the above, but in this section

El Kory, Mohamed Généralisation de la variation d'une fonction et application. [Generalization of the variation of a function, and application] 91c:31010

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Roth, Jean-Pierre Convergence presque-partout de quotients de potentiels. (English summary) [Almost-everywhere convergence of ratios of potentials] 91m:31007

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Dellacherie, C. Autour des ensembles semi-polaires. [Concerning semipolar sets] 91b:60191

Kilpeläinen, Tero (with Malý, Jan) Generalized Dirichlet problem in nonlinear potential theory. 91b:31010

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### 31D05 Axiomatic potential theory

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Ben Saad, Hedi Problème de type Skorohod. [A Skorohod-type problem] 91i:31010

Boboc, Nicu (with Bucur, Gheorghe) Subordination dans les structures excessives. (English summary) [Subordination in excessive structures] 91j:31012

— (with Bucur, Gheorghe) Dualities between standard  $H$ -cones. 91j:31011

Brzezina, Mirosław Wiener's test of thinness in potential theory. 91h:31012

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— Modèles simples de la théorie du potentiel non linéaire. [Simple models of nonlinear potential theory] 91k:31015

Eriksson-Bique, Sirkka-Liisa Completion of  $H$ -cones. 91e:31031

— A decomposition theorem for positive superharmonic functions. 91h:31013

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Laine, Ilpo Basic properties of harmonic spaces. (see 91b:31001)

Maagli, Habib (with Selmi, Mohamed) Perturbation des résolvantes et des semi-groupes par une mesure de Radon positive. [Perturbation of resolvents and semigroups by a positive Radon measure] 91j:31013

Netuka, Ivan Fine behaviour of solutions of the Dirichlet problem near an irregular point. (French summary) 91j:31014

Pirinen, Aulis On harmonic morphisms. (see 91b:31001)

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Bendikov, A. D. (with Pavlov, I. V.) Markov processes and harmonic structures. (Russian) (see 91g:60005)

Csirik, Laszlo (with Fitzsimmons, P. J.; Øksendal, Bernt) A stochastic characterization of harmonic morphisms. 91b:60190

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Frolík, Zdeněk (with Netuka, Ivan) Čech completeness and fine topologies in potential theory and real analysis. 91e:31027

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Hansen, Wolfhard (with Netuka, Ivan) Regularizing sets of irregular points. 91e:31012

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Shlyk, V. A. Geometry of removable sets for the space  $FD^p$ ,  $p \in (1, +\infty)$ , and normal regions in the sense of Hedberg. 91g:30029

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## 32-XX Several complex variables and analytic spaces {For infinite-dimensional holomorphy, see also 46G20, 58B12.}

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Shabat, B. V. ★ Introduction à l'analyse complexe. Tome 2. (French) [Introduction to complex analysis. Vol. 2] 91k:32001

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### 32-02 Research exposition (monographs, survey articles)

Berenstein, Carlos Alberto (with Struppa, Daniele C.) Complex analysis and convolution equations. (Russian) 91d:32001

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Łojasiewicz, Stanisław ★ Wstęp do geometrii analitycznej zespolonej. (Polish) [Introduction to complex analytic geometry] 91m:32007

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Bishop, Errett ★ Selected papers. 91b:01091

Holzapfel, R.-P. A voyage with three balloons. 91e:01004

(Wermer, John) see Bishop, Errett, 91b:01091

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Bishop, Errett A. see Bishop, Errett, 91b:01091

Biography:

Bishop, Errett A. see Bishop, Errett, 91b:01091

### 32-06 Proceedings, conferences, collections, etc.

(Barth, Wolf Paul) see Several complex variables, 91i:32001

(Narasimhan, Raghavan) see Several complex variables, 91i:32001

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Encyclopaedia of Mathematical Sciences ★ Several complex variables. VI. 91i:32001

Several complex variables ★ Several complex variables. VI. 91i:32001

Symposium:

Theory of Prehomogeneous Vector Spaces ★ Gaikinshitsu bekutoru kukun no kenkyū.

(Japanese) [Theory of prehomogeneous vector spaces] 91e:32001

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**Twistors in mathematics and physics** ★ Twistors in mathematics and physics. 91k:32033

## 32Axx Holomorphic functions of several complex variables

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- Chankav, M. Kh. On the representation of entire functions of several complex variables by a generalized exponential series. (Russian) 91b:32001  
 Daoud, S. Bases in the space of entire functions of several complex variables represented by Dirichlet series having finite order point. 91m:32001  
 Grechayuk, N. I. The growth cone of entire double Dirichlet series. 91k:32002  
 Kubicka, Ewa (with Poreda, Tadeusz) On the coefficients of the quasi-starlike maps of the unit polydisk in  $\mathbb{C}^2$ . (Russian and Polish summaries) 91g:32001  
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 Schnitzer, F. J. (with Schwaiger, Jens) Hornische Produkte und verallgemeinerte Lambertsche Reihen in einer und mehreren komplexen Veränderlichen. [Hornic products and generalized Lambert series in one and several complex variables] 91f:32001  
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Items with secondary classifications in 32A05

- Aikawa, Hiroaki (with Hayashi, Nakao; Onda, Isao; Saitoh, Saburo) Analytical extensions of the members of the Bergman and Szegő spaces on some tube domains. 91m:32004  
 Hayashi, Nakao *see* Aikawa, Hiroaki; et al., 91m:32004  
 Khudabergenov, G. Power series and holomorphic functions of several matrices. (Russian. Serbo-Croatian summary) 91m:32010  
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### 32A07 Special domains (Reinhardt, Hartogs, tube domains, etc.)

- Shimizu, Satoru Automorphisms of bounded Reinhardt domains. 91j:32001  
 Yin, Wei Ping Aut(D)-invariant harmonic functions. (Chinese) 91f:32002  
 Zaidenberg, M. G. Holomorphic rigidity of polynomial polyhedra, and quasihomogeneity. (Russian) 91j:32002  
 Zhou, Xiang Yu On matrix Reinhardt domains. 91e:32002

Items with secondary classifications in 32A07

- Barnard, Roger W. *see* FitzGerald, Carl H.; et al., 91k:32024 and Gong, Sheng; et al., 91j:32005  
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 Chen, So-Chin Real analytic regularity of the Szegő projection on circular domains. 91m:32023  
 Dzhurashyan, M. M. (with Karapetyan, A. O.) Integral representations in the generalized upper half-plane. 91k:32003  
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 FitzGerald, Carl H. (with Gong, Sheng; Barnard, Roger W.) The growth and 1/4-theorems for starlike mappings in  $\mathbb{C}^n$ . 91k:32024  
 — *see also* Gong, Sheng; et al., 91j:32005  
 Gindikin, S. G. *see* Faraut, Jacques, 91f:32039  
 Gong, Sheng (with FitzGerald, Carl H.; Barnard, Roger W.) A distortion theorem for biholomorphic mappings in  $\mathbb{C}^n$ . 91j:32005  
 — *see also* Yu, Qi Huang; et al., 91d:32006 and FitzGerald, Carl H.; et al., 91k:32024

- Jarnicki, Marek (with Pflug, Peter) Bergman completeness of complete circular domains. 91f:32026  
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 Kubicka, Ewa (with Poreda, Tadeusz) On the coefficients of the quasi-starlike maps of the unit polydisk in  $\mathbb{C}^2$ . (Russian and Polish summaries) 91g:32001  
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 Nakazawa, Noriyuki Asymptotic expansion of the Bergman kernel for strictly pseudoconvex complete Reinhardt domains in  $\mathbb{C}^2$ . 91e:32020  
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### 32A10 Holomorphic functions

- Shi, Ji Hual Hadamard products of functions holomorphic on a hypersphere. (Chinese) 91e:32001

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- Abate, Marco The Lindelöf principle and the angular derivative in strongly convex domains. 91d:32011  
 Balashova, O. Yu. Topological limits of Carleman classes. 91g:46028  
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 Gupta, Manjul Simultaneous automorphisms on the space of analytic functions of several complex variables. 91a:46025  
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 Nakano, Shigeo Extension of holomorphic functions with growth conditions. II. 91k:32013  
 Nastasiev, P. P. Commutants of some operators in a space of analytic functions of several variables. (Russian) 91h:47072  
 Nikić, Miodub Intermediate holomorphy. (Serbo-Croatian summary) 91e:58014  
 Pham, Frédéric Fonctions résurgentes implicites. (English summary) [An implicit resurgent function theorem] 91k:32007  
 Romanenko, V. Yu. *see* Bondar', A. V., 91a:46045  
 Shiffman, Bernard Separate analyticity and Hartogs theorems. 91a:32018  
 Singh, Dinesh Brangesian spaces in the polydisc. 91c:46038  
 Yger, Alain Formules de division et prolongement méromorphe. [Division formulas and meromorphic extension] 91e:32007  
 Zheng, Xue An (with Gong, Sheng) Deviation theorems for doubly holomorphic mappings on homogeneous domains. II. (Chinese) (Not in MR)

### 32A15 Entire functions

- Chakraborty, B. C. (with Rahman, Md. Muklesur) On the maximum terms of the derivatives of entire functions in several complex variables represented by multiple Dirichlet series. 91m:32002  
 Filippov, V. M. A problem on generators in a ring of entire functions. (Russian) 91b:32003  
 Logvinenko, V. N. Conditions for the boundedness of entire functions of exponential type inside the hyperoctant  $\mathbb{R}_+^n$ . 91a:32002  
 — A "multiple" analogue of a theorem of Cartwright for entire functions of several variables. 91m:32003  
 Momm, Siegfried Partial differential operators of infinite order with constant coefficients on the space of analytic functions on the polydisc. 91d:32002  
 Momoko, T. P. Growth of entire functions that are represented by an exponential series. (Russian) 91b:32004  
 Rahman, Md. Muklesur *see* Chakraborty, B. C., 91m:32002  
 Salmassi, Mohammad Functions of bounded indices in several variables. 91d:32003  
 Srivastava, S. N. (with Vijai, Vinita) On the geometric means of an entire function of several complex variables represented by multiple Dirichlet series. 91j:32003  
 Vijai, Vinita *see* Srivastava, S. N., 91j:32003  
 Znamenski, S. V. Sufficient conditions for surjectivity of a convolution operator in the space  $H(K)$ . (Russian) 91b:32005

Items with secondary classifications in 32A15

- Adepoju, Jerome A. On the mode of increase of composite sets of two complex variables in hyperspheres. 91m:32006  
 Daoud, S. Bases in the space of entire functions of several complex variables represented by Dirichlet series having finite order point. 91m:32001  
 Gramain, François Fonctions entières d'une ou plusieurs variables complexes prenant des valeurs entières sur une progression géométrique. [Entire functions of one or several complex variables that take integer values on a geometric progression] 91e:11086  
 Inoue, Toru Integral formulas for harmonic functions associated with boundaries of a bounded symmetric domain. 91a:32049  
 Muslin, I. Kh. Representation of functions by series in Mittag-Leffler functions. (Russian) 91h:32002

Ronkin, L. I. Subharmonic functions of completely regular growth in a closed cone. 91m:31002

Yger, Alain Formules de division et prolongement méromorphe. [Division formulas and meromorphic extension] 91c:32007

Zolozhuk, P. A. Some problems of representing solutions of operator equations in classes of entire functions. (Russian) (see 91j:00017)

### 32A17 Special families of functions (e.g. normal families)

Rilientass, Juhani A nulset for normal functions in several variables. 91c:32002

Items with secondary classifications in 32A17

Dovbush, P. V. Admissible limits of normal holomorphic functions of several complex variables. 91m:32005

### 32A20 Meromorphic functions

Items with secondary classifications in 32A20

Yger, Alain Formules de division et prolongement méromorphe. [Division formulas and meromorphic extension] 91c:32007

### 32A22 Nevanlinna theory (local); growth estimates; other inequalities (For geometric theory, see 32H25, 32H30.)

Items with secondary classifications in 32A22

Atsugi, Atsushi Some inequalities for some increasing additive functionals of planar Brownian motion and an application to Nevanlinna theory. 91b:60199

Cherry, William see Lang, Serge, 91k:32025

Lang, Serge (with Cherry, William) ★ Topics in Nevanlinna theory. 91k:32025 (Ye, Zhuan) see Lang, Serge, 91k:32025

### 32A25 Integral representation

Chen, Shu Jia An integral representation for holomorphic functions on a polyhedral domain in  $\mathbb{C}^n$ . (Chinese. English summary) 91a:32003

Cumenge, Anne Estimations limites pour la solution canonique de l'équation  $\bar{\partial}u = f$ . [Limit estimates for the canonical solution of the equation  $\bar{\partial}u = f$ ] 91f:32003

Dzhrbasyan, Kh. P. Integral representations of analytic functions in special domains of the space  $\mathbb{C}^2$  and their applications. (Russian) (see 91j:00017)

Dzhrbasyan, M. M. (with Karapetyan, A. O.) Integral representations in the generalized unit disk. 91g:32002

— (with Karapetyan, A. O.) Integral representations in the generalized upper half-plane. 91k:32003

Hatziafratis, Telemachos E. Integral representation formulas for differential forms on complex manifolds and applications to the  $\bar{\partial}$ -equation. 91a:32004

— Integral formulas for the  $\bar{\partial}$ -equation on complex projective algebraic manifolds. 91j:32004

Karapetyan, A. O. see Dzhrbasyan, M. M., 91g:32002 and 91k:32003

Kas'yanov, E. Yu. ★ Интегральные представления голоморфных функций многих комплексных переменных и их приложения. (Russian) [Integral representations of holomorphic functions of several complex variables, and their applications] (Not in MR)

Kytmanov, A. M. (with Nikitina, T. N.) Multidimensional Carleman formulas in Siegel domains. (Russian) 91h:32001

Laurent-Thiébaud, Christine Transformation de Bochner-Martinelli dans une variété de Stein. (English summary) [The Bochner-Martinelli transform in a Stein manifold] 91g:32003

Li, Lun Huan Applications of integral representations of nondegenerate Weil polyhedra. (Chinese. English summary) 91h:32002

Lin, Liang Yu Linear singular integral equations in several complex variables. (Chinese. English summary) 91g:32004

— (with Pan, Wei) Systems of singular linear integral equations in  $\mathbb{C}^n$ . (Chinese. English summary) 91k:32004

Marinov, Marin Stefanov The Carleman integral formula for functions of several matrix variables. 91f:32004

Nikitina, T. N. see Kytmanov, A. M., 91h:32001

Pan, Wei see Lin, Liang Yu, 91k:32004

Podgorin, V. P. The Bergman-Weil integral representation and commutation relations. (Russian) 91b:32006

Sergeev, A. G. Integral representations and the  $\bar{\partial}$ -equation in the future tube. (Russian) 91a:32005

Yao, Zong Yuan The Bochner-Ono formula for smooth functions on bounded domains in  $\mathbb{C}^n$ . (Chinese. English summary) 91d:32004

Items with secondary classifications in 32A25

Burgués i Badia, Josep Ma. Hölder and  $L^p$  estimates for the solutions of the  $\bar{\partial}$ -equation in nonsmooth strictly pseudoconvex domains. 91j:32017

Chang, Der-Chen E. An application of Ricci-Stein theorem to estimates of the C-R equations. 91g:32017

Coupet, Bernard Dualité dans les espaces de Bergman. [Duality in Bergman spaces] 91b:32025

Dzhrbasyan, M. M. (with Karapetyan, A. O.) Integral representations in the generalized unit disc. 91m:30054

Hatziafratis, Telemachos E. A global residue theorem on analytic varieties. 91e:32003

Inoue, Toru Integral formulas for harmonic functions associated with boundaries of a bounded symmetric domain. 91a:32049

Kang, Hyeonbae An approximation theorem for Szegő kernels and applications. 91i:32025

Karapetyan, A. O. see Dzhrbasyan, M. M., 91m:30054

Lu, Qi Keng The Green forms and the Cauchy formulas on a Kähler manifold. (Chinese summary) 91b:32014

Ryan, John Cells of harmonicity and generalized Cauchy integral formulae. 91g:32014

Shaw, Mel-Chi Optimal Hölder and  $L^p$  estimates for  $\bar{\partial}$ , on the boundaries of real ellipsoids in  $\mathbb{C}^n$ . 91f:32017

Wada, Ryoko Fantappiè transformations of analytic functionals on the sphere. 91b:32009

### 32A27 Local theory of residues [see also 32C30]

Hatziafratis, Telemachos E. A global residue theorem on analytic varieties. 91e:32003

Kytmanov, A. M. Determination of the coefficients of the kinetic polynomial by means of multidimensional residues. (Russian. Serbo-Croatian summary) 91d:32005

### 32A30 Other generalizations of function theory of one complex variable (should also be assigned at least one classification number from Section 30) (For functions of several hypercomplex variables, see 30G35.)

Barnard, Roger W. see Gong, Sheng; et al., 91j:32005

Draganu, Mircea Boundary value problems with derivatives in the theory of functions of two complex variables. (Romanian summary) 91c:32003

FitzGerald, Carl H. see Gong, Sheng; et al., 91j:32005

Gong, Sheng (with FitzGerald, Carl H.; Barnard, Roger W.) A distortion theorem for biholomorphic mappings in  $\mathbb{C}^2$ . 91j:32005

— see also Yu, Qi Huang; et al., 91d:32006

Wang, Shi Kun see Yu, Qi Huang; et al., 91d:32006

Yu, Qi Huang (with Wang, Shi Kun; Gong, Sheng) The growth and  $\frac{1}{4}$ -theorems for starlike mapping in  $B^n$ . (Chinese summary) 91d:32006

Zhang, Wan Gao The Riemann boundary value problem on a polydisc. (Chinese. English summary) 91d:32007

Items with secondary classifications in 32A30

Barnard, Roger W. see FitzGerald, Carl H.; et al., 91j:32024

Bourdon, Paul S. (with Shapiro, Joel H.) Spectral synthesis and common cyclic vectors. 91c:47039

Chakraborty, B. C. (with Rahman, Md. Muklesur) On the maximum terms of the derivatives of entire functions in several complex variables represented by multiple Dirichlet series. 91m:32002

Choe, Boo Rim An integral mean inequality for Hadamard products on the polydisc. 91d:32008

Daoud, S. Bases in the space of entire functions of several complex variables represented by Dirichlet series having finite order point. 91m:32001

FitzGerald, Carl H. (with Gong, Sheng; Barnard, Roger W.) The growth and  $1/4$ -theorems for starlike mappings in  $\mathbb{C}^n$ . 91j:32024

Gilbert, John E. (with Murray, Margaret A. M.)  $H^p$ -theory on Euclidean space and the Dirac operator. 91c:30094

Gong, Sheng see FitzGerald, Carl H.; et al., 91j:32024

Graham, Ian Distortion theorems for holomorphic maps between convex domains in  $\mathbb{C}^n$ . 91c:32018

Grechanyuk, N. I. The growth cone of entire double Dirichlet series. 91k:32002

Malonek, Helmuth A new hypercomplex structure of the Euclidean space  $\mathbb{R}^{m+1}$  and the concept of hypercomplex differentiability. 91f:30073

Murray, Margaret A. M. see Gilbert, John E., 91c:30094

Poretski, Tadeusz On the univalent subordination chains of holomorphic mappings in Banach spaces. 91a:46046

Rahman, Md. Muklesur see Chakraborty, B. C., 91m:32002

Ronkin, L. I. Jensen's theorem for holomorphic almost-periodic mappings. 91m:32027

Schwarz, Benjamin On the geometry of some matrix domains. 91m:32024

Shapiro, Joel H. see Bourdon, Paul S., 91m:47039

Stodkowski, Zbigniew Complex interpolation of normed and quasinormed spaces in several dimensions. II. Properties of harmonic interpolation. 91e:46107

### 32A35 $H^p$ -spaces [see also 32M15, 42B30, 43A85, 46J15]

Adachi, Ken-ichi  $H^1$  estimates for extensions of holomorphic functions in certain pseudoconvex domains. 91h:32003

Andersson, Mats (with Carlsson, Hasse) On Varopoulos' theorem about zero sets of  $H^p$ -functions. (French summary) 91j:32006

Carlsson, Hasse see Andersson, Mats, 91j:32006

Choi, Jun Soo (with Kim, Hong Oh) Composition with a nonhomogeneous bounded holomorphic function on the ball. 91a:32006

Choe, Boo Rim An integral mean inequality for Hadamard products on the polydisc. 91d:32008

— Derivatives of Hardy functions. 91h:32004

Grauert, Hans Editorial statement on the paper: "The corona theorem for the ball and polydisc" [Math. Ann. 287 (1990), no. 2, 185–192; MR 91g:32005a] by N. Pandeski. 91g:32005b

Kim, Hong Oh see Choi, Jun Soo, 91a:32006

Kwoh, E. G. Image area and the weighted subspaces of Hardy spaces. 91i:32002

Pandeski, Nikola The corona theorem for the ball and polydisc. 91g:32005a

— see also Grauert, Hans, 91g:32005b

Thomas, Pascal J. Subsets of Hardy-class zero in the ball. 91f:32005

Wolniewicz, Tomasz M. On isomorphisms between Hardy spaces on complex balls. 91b:32007

Items with secondary classifications in 32A35

Beitroun, F. (with Burbea, J.) Sobolev-type imbedding theorems for harmonic Hardy-Sobolev spaces. 91e:46038

Bertolo, Nativiana Pereira Biharmonic functions in the context of weighted Hardy spaces. (Portuguese. English summary) 91j:42019

Burbea, J. see Beitroun, F., 91e:46038



- Feldman, Mark (with Rochberg, Richard) Singular value estimates for commutators and Hankel operators on the unit ball and the Heisenberg group. **91e:47024**
- Gilbert, John E. (with Murray, Margaret A. M.)  $H^p$ -theory on Euclidean space and the Dirac operator. **91c:30094**
- Hahn, Kyong T. (with Yousfi, El Hassan) Les espaces de Besov  $\mathcal{H}$ -harmoniques en liaison avec les opérateurs de Hankel. (English summary) [ $\mathcal{H}$ -harmonic Besov spaces in connection with Hankel operators] **91m:46038**
- Ihrigimov, G. I. Bases consisting of exponentials in the spaces  $E^p(D^n)$  on a polyhedron and representation of functions of this space as sums of periodic functions. **91g:46031**
- Jafari, F. Carleson measures in Hardy and weighted Bergman spaces of polydisks. **91j:47032**
- Jević, Miroslav An inclusion operator in Hardy spaces on the unit ball in  $\mathbb{C}^N$ . (Serbo-Croatian summary) **91i:46022**
- Two Carleson measure theorems for Hardy spaces. **91b:42041**
- Kwak, Do Young (with Lee, Sungyun) Some characterizations of the Bloch space in the ball. **91a:46057**
- Lee, Sungyun see Kwak, Do Young, **91a:46057**
- Murray, Margaret A. M. see Gilbert, John E., **91c:30094**
- Nawrocki, Marek Multipliers, linear functionals and the Fréchet envelope of the Smirnov class  $N_+(U^n)$ . **91c:46037**
- Ostrogorski, Tatjana Weighted  $H^p$  spaces on homogeneous halfplanes. **91e:46034**
- Petrenko, K. B. Boundary properties of vector-valued analytic functions in a polydisk. (Russian. English summary) **91d:32014**
- Rochberg, Richard see Feldman, Mark, **91e:47024**
- Tong, Yu Sun Composition operators on Hardy space. (Chinese summary) **91c:47058**
- Wallstén, Robert Hankel operators between weighted Bergman spaces in the ball. **91b:47041**
- Yousfi, El Hassan see Hahn, Kyong T., **91m:46038**
- Zhu, Ke He Möbius invariant Hilbert spaces of holomorphic functions in the unit ball of  $\mathbb{C}^n$ . **91e:46035**

### 32A37 Other spaces of holomorphic functions (e.g. bounded mean oscillation (BMOA), vanishing mean oscillation (VMOA) in $n$ dimensions) [see also 46Exx]

- Aikawa, Hiroaki (with Hayashi, Nakao; Onda, Isao; Saitoh, Saburo) Analytical extensions of the members of the Bergman and Szegő spaces on some tube domains. **91m:32004**
- Békollé, David (with Omporo, Mathias) Le dual de l'espace de Bergman  $A^1$  dans la boule de Lie de  $\mathbb{C}^n$ . (English summary) [The dual of the Bergman space  $A^1$  on the Lie ball in  $\mathbb{C}^n$ ] **91j:32007**
- Choe, Boo Rim Weights induced by homogeneous polynomials. **91e:32004**
- Hayashi, Nakao see Aikawa, Hiroaki; et al., **91m:32004**
- Oksendal, Bernt A fine topology criterion for vanishing mean oscillation. **91d:32009**
- Omporo, Mathias see Békollé, David, **91j:32007**
- Onda, Isao see Aikawa, Hiroaki; et al., **91m:32004**
- Saitoh, Saburo see Aikawa, Hiroaki; et al., **91m:32004**
- Xiao, Jian Bin Carleson measure and multipliers on Bergman space. **91d:32010**
- Items with secondary classifications in 32A37
- Békollé, David (with Berger, C. A.; Coburn, L. A.; Zhu, Ke He) BMO in the Bergman metric on bounded symmetric domains. **91j:32034**
- Berger, C. A. see Békollé, David; et al., **91j:32034**
- Bourgain, J. Homogeneous polynomials on the ball and polynomial bases. **91g:46044**
- Choe, Jun See (with Kim, Hong Oh) Composition with a nonhomogeneous bounded holomorphic function on the ball. **91a:32006**
- Coburn, L. A. see Békollé, David; et al., **91j:32034**
- Dzhirbashyan, A. E. (with Shmoyan, F. A.) ★ Topics in the theory of  $A_p^q$  spaces. **91k:46019**
- Kim, Hong Oh see Choe, Jun See, **91a:32006**
- Misra, Baidyanath (with Pattanayak, S.) Toeplitz operators on the ball. **91m:47033**
- Oleinik, V. L. (with Perelman, G. S.) Carleson's embedding theorem for a weighted Bergman space. **91h:46063**
- Pattanayak, S. see Misra, Baidyanath, **91m:47033**
- Perelman, G. S. see Oleinik, V. L., **91h:46063**
- Shmoyan, F. A. see Dzhirbashyan, A. E., **91k:46019**
- Wang, Jian Wen Trace ideal criteria for Toeplitz operators on Bergman spaces. (Chinese) **91i:47042**
- Zhu, Ke He Schatten class Hankel operators on the Bergman space of the unit ball. **91m:47036**
- see also Békollé, David; et al., **91j:32034**

### 32A40 Boundary behavior

- Abate, Marco The Lindelöf principle and the angular derivative in strongly convex domains. **91d:32011**
- Ahern, Patrick (with Bruna, Joaquim) On the modulus of absolute continuity of holomorphic functions in the ball. **91g:32006**
- Bruna, Joaquim (with Cascante, Carmen) Restriction to transverse curves of some spaces of functions in the unit ball. **91d:32012**
- see also Ahern, Patrick, **91g:32006**
- Cascante, Carmen see Bruna, Joaquim, **91d:32012**
- Dovbush, P. V. Admissible limits of normal holomorphic functions of several complex variables. **91m:32005**
- Iordan, Andrei On the radial cluster sets for holomorphic functions in the unit ball of  $\mathbb{C}^n$ . **91j:32007**
- Krotov, V. G. Boundary behavior of functions in Hardy spaces. (Russian. English and Georgian summaries) **91k:32005**
- Kytmanov, A. M. (with Nikitina, T. N.) Carleman formulas in Siegel domains. (Russian) **91d:32013**
- Nikitina, T. N. see Kytmanov, A. M., **91d:32013**

- Petrenko, K. B. Boundary properties of vector-valued analytic functions in a polydisk. (Russian. English summary) **91d:32014**
- Saeiro, Juan Tangential boundary limits and exceptional sets for holomorphic functions in Dirichlet-type spaces. **91b:32008**
- Items with secondary classifications in 32A40
- Carmichael, Richard D. (with Pathak, R. S.; Pilipović, Stevan) Cauchy and Poisson integrals of ultradistributions. **91d:46047**
- Cascante, Carmen Interpolation sets for Lipschitz functions on curves of the unit sphere. **91j:32012**
- Chamat, Jacques (with Chollet, Anne-Marie) Classes de Gevrey non isotropes et application à l'interpolation. [Nonisotropic Gevrey classes and application to interpolation] **91d:32021**
- Chollet, Anne-Marie see Chamat, Jacques, **91d:32021**
- Detraz, Jacqueline Problème de Dirichlet pour le système  $\partial^2 f / \partial \bar{z}_i \partial z_j = 0$ . [The Dirichlet problem for the system  $\partial^2 f / \partial \bar{z}_i \partial z_j = 0$ ] **91i:35061**
- Krantz, Steven G. On a theorem of Stein. **91b:32026**
- Pathak, R. S. see Carmichael, Richard D.; et al., **91d:46047**
- Pilipović, Stevan see Carmichael, Richard D.; et al., **91d:46047**
- Popenov, S. V. Weighted spaces of functions that are analytic in a bounded convex domain in  $\mathbb{C}^n$ . (Russian) **91b:46026**
- Thomas, Pascal J. Subsets of Hardy-class zero in the ball. **91f:32005**
- Zhu, Ke He Möbius invariant Hilbert spaces of holomorphic functions in the unit ball of  $\mathbb{C}^n$ . **91e:46035**

### 32A45 Hyperfunctions [see also 46F15]

- Ito, Yoshifumi Theory of (vector valued) Fourier hyperfunctions. Their realization as boundary values of (vector valued) slowly increasing holomorphic functions. III. **91a:32007**
- Nagamachi, S. see Nishimura, Takeshi, **91i:32003** and **91i:32004**
- Nishimura, Takeshi (with Nagamachi, S.) An approximation theorem of Runge type and its applications to the theory of Fourier hyperfunctions. **91i:32003**
- (with Nagamachi, S.) On supports of Fourier hyperfunctions. **91i:32004**
- Wada, Ryoko Fantappiè transformations of analytic functionals on the sphere. **91b:32009**
- Items with secondary classifications in 32A45
- Iagolnitzer, D. (with Iagolnitzer, L.) Nonholonomicity of the  $S$  matrix and Green functions in quantum field theory: a direct algebraic proof in some simple situations. **91g:81161**
- Iagolnitzer, L. see Iagolnitzer, D., **91g:81161**
- Leichtnam, Éric Le problème de Cauchy ramifié. [The ramified Cauchy problem] **91d:35008**
- Muro, Masakazu On zeta functions associated with the exceptional Lie group of type  $E_6$ . **91d:11053**
- Nishimura, Hirokazu Some corrections on my paper: "Some connections between Heyting valued set theory and algebraic geometry—prolegomena to intuitionistic algebraic geometry" [Publ. Res. Inst. Math. Sci. 23 (1987), no. 3, 501–515; MR 88k:03125]. **91a:03117**
- Popenov, S. V. Weighted spaces of functions that are analytic in a bounded convex domain in  $\mathbb{C}^n$ . (Russian) **91b:46026**
- Ziemian, Bogdan The Mellin transformation and multidimensional generalized Taylor expansions of singular functions. **91a:58177**

### 32A99 None of the above, but in this section

- Adepoju, Jerome A. On the mode of increase of composite sets of two complex variables in hyperspheres. **91m:32006**
- Items with secondary classifications in 32A99
- Acharya, B. P. (with Mohapatra, T.) Approximation of  $n$ -dimensional integral of analytic function of several complex variables. (Serbo-Croatian summary) **91i:65045**
- Goldberg, Moshe Quasimonotonic functions on  $\mathbb{C}^n$  and the mapping  $f \rightarrow f^*$ . **91k:15048**
- Janson, Svante (with Peetre, Jaak; Rochberg, Richard) Hankel forms and the Fock space. **91a:47029**
- Korobelnik, Yu. F. Comparison of topologies in inductive limits of function spaces. (Russian) **91b:46022**
- Mohapatra, T. see Acharya, B. P., **91i:65045**
- Peetre, Jaak see Janson, Svante; et al., **91a:47029**
- Rochberg, Richard see Janson, Svante; et al., **91a:47029**

### 32Bxx Local analytic geometry [see also 13–XX and 14–XX]

- Łojasiewicz, Stanisław ★ Wstęp do geometrii analitycznej zespolonej. (Polish) [Introduction to complex analytic geometry] **91m:32007**

### 32B05 Analytic algebras and generalizations, preparation theorems

- Berenstein, Carlos Alberto (with Yger, Alain) Bounds for the degrees in the division problem. **91c:32004**
- Dencker, Nils Preparation theorems for systems. **91g:32008**
- Tougeron, Jean-Claude Sur les racines d'un polynôme à coefficients séries formelles. [On the roots of a polynomial with coefficients that are formal series] **91b:32010**
- Tworzowski, Piotr A note on the Max Noether theorem. (Polish summary) **91c:32005**
- Yger, Alain see Berenstein, Carlos Alberto, **91c:32004**
- Zilber, Jorge C. Local analytic rings. (French summary) **91g:32009**

Items with secondary classifications in 32B05

- Flondor, Paul (with Pascu, Eugen) On superanalytic algebras. 91h:58015  
Izumi, Shuzo The rank condition and convergence of formal functions. 91a:32010  
Pascu, Eugen see Flondor, Paul, 91h:58015

### 32B10 Germs of analytic sets

- Hauser, Herwig (with Müller, Gerd) Simplification et factorisation unique des germes d'espaces analytiques. (English summary) [Cancellation and unique factorization for germs of analytic spaces] 91f:32006  
— (with Müller, Gerd) The cancellation property for direct products of analytic space germs. 91a:32008  
Müller, Gerd see Hauser, Herwig, 91a:32008 and 91f:32006  
Tworzewski, Piotr Intersections of analytic sets with linear subspaces. 91j:32008

Items with secondary classifications in 32B10

- Oeljeklaus, K. (with Richthofer, W.) Linearization of holomorphic vector fields and a characterization of cone singularities. 91f:32042  
Richthofer, W. see Oeljeklaus, K., 91f:32042  
Tancredi, Alessandro On the complexification of Nash spaces. (Italian. English summary) 91b:32012

### 32B15 Analytic subsets of affine space

- Dioussy, G. Analyticité séparée et prolongement analytique. [Separate analyticity and analytic continuation] 91h:32005

Items with secondary classifications in 32B15

- Matumoto, Kazuko Distribution of the analytic sets determined by an open holomorphic mapping. 91a:32032  
Tognoli, Alberto On the analyticity of the homology. 91a:32011

### 32B20 Semi-analytic sets and subanalytic sets [see also 14P15]

- Bierstone, Edward (with Milman, Pierre D.; Parusiński, A.) A function which is arc-analytic but not continuous. 91m:32008  
Kurdyka, K. (with Poly, J.-B.; Raby, Gilles) Moyennes des fonctions sous-analytiques, densité, cône tangent et tranches. [Means of subanalytic functions, density, tangent cone and slices] 91b:32011  
Milman, Pierre D. see Bierstone, Edward, et al., 91m:32008  
Parusiński, A. see Bierstone, Edward, et al., 91m:32008  
Pawłucki, Wiesław Points de Nash des ensembles sous-analytiques. (English summary) [Nash points of subanalytic sets] 91a:32009  
Poly, J.-B. see Kurdyka, K., et al., 91b:32011  
Raby, Gilles see Kurdyka, K., et al., 91b:32011  
Romo Santos, C. Transversality of manifolds. Characterization. (Spanish. English summary) 91d:32015  
Ruiz, Jesús M. On the topology of global semianalytic sets. 91d:32016
- Items with secondary classifications in 32B20
- Shiota, Masahiro Piecewise linearization of subanalytic functions. II. 91m:32009  
— Subanalytic geometry and PL topology. 91h:32005  
Sussmann, Hector J. Synthesis, presynthesis, sufficient conditions for optimality and subanalytic sets. 91e:93038  
Teissier, Bernard Sur la triangulation des morphismes sous-analytiques. [On the triangulation of subanalytic morphisms] 91k:32006  
Tougeron, Jean-Claude Sur les racines d'un polynôme à coefficients séries formelles. [On the roots of a polynomial with coefficients that are formal series] 91b:32010

### 32B25 Triangulation and related questions

- Shiota, Masahiro Piecewise linearization of subanalytic functions. II. 91m:32009  
Teissier, Bernard Sur la triangulation des morphismes sous-analytiques. [On the triangulation of subanalytic morphisms] 91k:32006

Items with secondary classifications in 32B25

- Sabbah, Claude Modules d'Alexander et  $\mathcal{D}$ -modules. [Alexander modules and  $\mathcal{D}$ -modules] 91i:32008

### 32B99 None of the above, but in this section

- Izumi, Shuzo The rank condition and convergence of formal functions. 91a:32010  
Pham, Frédéric Fonctions résurgentes implicites. (English summary) [An implicit resurgent function theorem] 91k:32007

Items with secondary classifications in 32B99

- Denef, Jan (with Harbater, David) Global approximation in dimension two. 91b:14004  
Harbater, David see Denef, Jan, 91b:14004  
Neumann, Walter D. On the topology of curves in complex surfaces. 91b:14016

## 32Cxx General theory of analytic spaces

### 32C05 Real-analytic manifolds, real-analytic spaces [see also 14Pxx, 58A07]

- Langmann, Klaus Erzeugendenzahl von reellen Moduln. [Number of generators of real modules] 91k:32008  
Loboda, A. V. Linearizability of holomorphic mappings of generating manifolds of codimension 2 in  $\mathbb{C}^n$ . 91k:32006

- Shiota, Masahiro Subanalytic geometry and PL topology. 91h:32005  
Tognoli, Alberto On the analyticity of the homology. 91a:32011

Items with secondary classifications in 32C05

- Kucharz, Wojciech Global almost analytic algebraicity of analytic sets. 91e:14068  
Ruiz, Jesús M. On the real spectrum of a ring of global analytic functions. 91e:14050  
Stengle, Gilbert (with Yukich, J. E.) Some new Vapnik-Chervonenkis classes. 91f:60014  
Yukich, J. E. see Stengle, Gilbert, 91f:60014

### 32C07 Real-analytic sets, complex Nash functions [see also 14P15, 14P20]

- Tancredi, Alessandro On the complexification of Nash spaces. (Italian. English summary) 91b:32012

Items with secondary classifications in 32C07

- Garrity, Thomas (with Warren, Joe) Geometric continuity. 91k:65043  
Tworzewski, Piotr Intersections of analytic sets with linear subspaces. 91j:32008  
Warren, Joe see Garrity, Thomas, 91k:65043

### 32C10 Complex manifolds {For almost complex manifolds, see 53C15.}

- Balci, Sabahattin On the sheaf of the homology groups of the complex manifold. 91h:32006  
Duchamp, T. (with Kalka, M.) Complex foliations. 91a:32012  
Kalka, M. see Duchamp, T., 91a:32012  
Namba, Makoto Finite branched coverings of complex manifolds. (Japanese) 91h:32007  
Toledo, Domingo Examples of fundamental groups of compact Kähler manifolds. 91e:32006

Items with secondary classifications in 32C10

- Byrnes, Graham B. Complex manifolds and geometrical quantisation. 91h:58048  
Ji, Shanyu Image of analytic hypersurfaces. 91k:32023  
Mok, Ngaiming An embedding theorem of complete Kähler manifolds of positive Ricci curvature onto quasi-projective varieties. 91b:53084  
Poon, Yat Sun Self-duality, twistor theory, its generalization and application. 91a:32043  
Tian, Gang (with Yau, Shing-Tung) Complete Kähler manifolds with zero Ricci curvature. I. 91a:53096  
Yau, Shing-Tung see Tian, Gang, 91a:53096

### 32C11 Complex supergeometry [see also 14A22, 14M30, 58A50]

- Hodgkin, Luke Problems of fields on super Riemann surfaces. 91e:32005

Items with secondary classifications in 32C11

- Aoki, Kenichiro (with Periwai, Vipul) Twisted nonabelian determinants on Riemann supersurfaces. 91d:58256  
Bartocci, Claudio (with Bruzzo, Ugo) On DeWitt supermanifolds and their Picard variety. (French summary) 91a:58015  
Bruzzo, Ugo see Bartocci, Claudio, 91a:58015  
Bryant, Peter R. Graded Riemann surfaces and Krichever-Novikov algebras. 91m:14083  
Crnković, Čedomir (with Sotkov, G. M.) Strings on hyperelliptic supersurfaces. 91g:32026  
Dupili, S. A. Superconformal  $N = 2$  transformations and Riemann surfaces. (Russian. English summary) 91k:81186  
Falqui, Gregorio (with Reina, Cesare) A note on the global structure of supermoduli spaces. 91k:14038  
— (with Reina, Cesare)  $N = 2$  super Riemann surfaces and algebraic geometry. 91f:14050  
Hamada, Ken-Ji (with Takao, Masaru) Functional integral methods for fermionic string and super Riemann surfaces. 91e:81105  
La, HoSeong (with Nelson, Philip) Effective field equations for fermionic strings. 91g:81122  
Lott, John Torsion constraints in supergeometry. 91m:58009  
Manin, Yu. I. Neveu-Schwarz sheaves and differential equations for Mumford superforms. 91b:32036  
— Superalgebraic curves and quantum strings. (Russian) 91m:14084  
Matsumoto, Shuji (with Uehara, Shozo; Yasui, Yukinori) A superparticle on the super Riemann surface. 91j:58164  
Myung, Y. S. Correlation function for  $N = 1$  superconformal models on the supertorus. 91d:81135  
Nelson, Philip see La, HoSeong, 91g:81122  
Periwai, Vipul see Aoki, Kenichiro, 91d:58256  
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Reina, Cesare see Falqui, Gregorio, 91f:14050 and 91k:14038  
Sotkov, G. M. see Crnković, Čedomir, 91g:32026  
Takao, Masaru see Hamada, Ken-Ji, 91e:81105  
Topiwala, Pankaj (with Rabin, Jeffrey M.) The super GAGA principle and families of super Riemann surfaces. 91k:14039  
Uehara, Shozo see Matsumoto, Shuji, et al., 91j:58164  
Wang, Shi Kun (with Xu, Kai Wen) Superconformal algebra of meromorphic vector fields with multipoles on a super Riemann sphere. 91k:17025  
Xu, Kai Wen see Wang, Shi Kun, 91k:17025  
Yasui, Yukinori see Matsumoto, Shuji, et al., 91j:58164

### 32C15 Complex spaces

- Coltina, Mihnea Recouvrements de Stein finis pour les espaces complexes. (English summary) [Finite Stein coverings for complex spaces] 91b:32013  
Dickenstein, Alicia (with Sessa, Carmen) Nilpotent orders of analytic ideals. 91e:32007  
Sessa, Carmen see Dickenstein, Alicia, 91e:32007

## Items with secondary classifications in 32C15

- Berkovich, Vladimir G. ★ Spectral theory and analytic geometry over non-Archimedean fields. 91h:32038
- Dethloff, Gerd (with Grauert, Hans) Deformation of compact Riemann surfaces  $Y$  of genus  $p$  with distinguished points  $P_1, \dots, P_n \in Y$ . 91d:32027
- Grauert, Hans see Dethloff, Gerd, 91d:32027

## 32C16 CR-manifolds

- Han, Chong-Kyu Rigidity of CR submanifolds and analyticity of CR immersions. 91e:32008

## Items with secondary classifications in 32C16

- Bassendi, M. S. (with Rothschild, Linda Preiss) Transversal Lie group actions on abstract CR manifolds. 91h:32015
- Chen, Zhi Hua see Han, Zu Hong, 91f:32009
- Fefferman, Charles L. (with Kohn, J. J.) Estimates of kernels on three-dimensional CR manifolds. 91h:32013
- Han, Zu Hong (with Chen, Zhi Hua) Holomorphic extension of CR functions near a point of higher type. (Chinese) 91f:32009
- Kohn, J. J. see Fefferman, Charles L., 91h:32013
- Rothschild, Linda Preiss see Bassendi, M. S., 91h:32015
- Sato, Hajime (with Yamaguchi, Keizo) Lie contact manifolds. 91m:53027
- Thapova, R. G. Holomorphic surfaces and CR-surfaces of a G-elliptic 6-space. (Russian) 91g:53061
- Yamaguchi, Keizo see Sato, Hajime, 91m:53027

## 32C17 Kähler geometry {For differential-geometric methods see 53C55.}

- Li, Peter (with Yau, Shing-Tung) Curvature and holomorphic mappings of complete Kähler manifolds. 91g:32010
- Lu, Qi Kang The Green forms and the Cauchy formulas on a Kähler manifold. (Chinese summary) 91h:32014
- Yau, Shing-Tung see Li, Peter, 91g:32010
- Items with secondary classifications in 32C17
- Campana, Frédéric (with Schumacher, Georg) A geometric algebraicity property for moduli spaces of compact Kähler manifolds with  $h^{2,0} = 1$ . 91d:32039
- Dillen, Franki (with Vrancken, Luc; Verstraeten, Leopold) Complex affine differential geometry. 91i:53019
- Geatli, Laura On the curvature of homogeneous Kähler metrics of bounded domains. 91g:32043
- Gillet, Henri (with Soulé, Christophe) The holonomy of the determinant of cohomology of an algebraic bundle. 91g:58295
- Ligzber, Anatoly S. (with Wood, John W.) Uniqueness of the complex structure on Kähler manifolds of certain homotopy types. 91g:32039
- Nadel, Alan Michael Semisimplicity of the group of biholomorphisms of the universal covering of a compact complex manifold with ample canonical bundle. 91f:32038
- Ohnita, Yoshihiro (with Udagawa, Seiichi) Stability, complex-analyticity and constancy of pluriharmonic maps from compact Kähler manifolds. 91k:58108
- Pedersen, Henrik (with Poon, Yat Sun) Kähler surfaces with zero scalar curvature. 91f:32057
- Periwal, Vipul (with Strominger, Andrew) Kähler geometry of the space of  $N = 2$  superconformal field theories. 91g:32028
- Poon, Yat Sun see Pedersen, Henrik, 91f:32057
- Schumacher, Georg see Campana, Frédéric, 91d:32039
- Shi, Wan-Xiong Complete noncompact Kähler manifolds with positive holomorphic bisectional curvature. 91e:53069
- Shore, G. M. Geometry of supersymmetric sigma models. II. Fermions, connections and currents. 91h:53067
- Soulé, Christophe see Gillet, Henri, 91g:58295
- Strominger, Andrew see Periwal, Vipul, 91g:32028
- Tian, Gang On a set of polarized Kähler metrics on algebraic manifolds. 91j:32031
- Todorov, Andrei Nikolov The Weil-Petersson geometry of the moduli space of  $SU(n \geq 3)$  (Calabi-Yau) manifolds. I. 91f:32022
- Toledo, Domingo Examples of fundamental groups of compact Kähler manifolds. 91e:32006
- Udagawa, Seiichi see Ohnita, Yoshihiro, 91k:58108
- Verstraeten, Leopold see Dillen, Franki; et al., 91i:53019
- Vrancken, Luc see Dillen, Franki; et al., 91i:53019
- Wood, John W. see Ligzber, Anatoly S., 91g:32039
- Yin, Wei Ping Aut(D)-invariant harmonic functions. (Chinese) 91f:32002

## 32C25 Analytic subsets and submanifolds

- Raby, Gilles Paramétrix, cohomologie et formes méromorphes. [Parametrix, cohomology and meromorphic forms] 91g:32011

## Items with secondary classifications in 32C25

- Tancredi, Alessandro On the complexification of Nash spaces. (Italian. English summary) 91h:32012
- (with Tognoli, Alberto) Relative approximation theorems of Stein manifolds by Nash manifolds. (Italian summary) 91d:32022
- Tognoli, Alberto see Tancredi, Alessandro, 91d:32022

## 32C30 Integration on analytic sets and spaces, currents {For local theory, see 32A25 or 32A27.}

- Bartel, Daniel (with Maire, H.-M.) Asymptotic expansion of complex integrals via Mellin

transform. 91e:32006

- Biel, Mongi Cône tangent à un courant positif fermé de type  $(1, 1)$ . (English summary) [Tangent cone of a nonnegative closed  $(1, 1)$  current] 91e:32009
- Maire, H.-M. see Bartel, Daniel, 91e:32006
- Ofman, Salomon  $d^d$ - et  $d^d$ -cohomologies d'une variété compacte privée d'un point. Application à l'intégration sur les cycles. II. (English summary) [ $d^d$ - and  $d^d$ -cohomologies of a compact manifold with one puncture. Application to the integration of cycles. II] 91a:32013
- Ousqqa, Abderrahmane Noyau et image de la transformation définie par intégration sur les droites de  $P_3(\mathbb{C})$  ne rencontrant pas une droite donnée. (English summary) [Kernel and image of the transform defined by integration on lines in  $P_3(\mathbb{C})$  not meeting a fixed line] 91j:32009
- Passare, Mikael Courants méromorphes et égalité de la valeur principale et de la partie finie. [Meromorphic currents and equality of the principal value and the finite part] 91g:32012
- Yger, Alain Formules de division et prolongement méromorphe. [Division formulas and meromorphic extension] 91e:32007
- Items with secondary classifications in 32C30
- Azhari, Abdelhak Sur la conjecture de Chudnovsky-Demailly et les singularités des hypersurfaces algébriques. (English summary) [On the Chudnovsky-Demailly conjecture and singularities of algebraic hypersurfaces] 91e:32025
- Bartel, Daniel (with Maire, H.-M.) Développements asymptotiques, transformation de Mellin complexe et intégration sur les fibres. [Asymptotic expansions, complex Mellin transform and integration over the fibers] 91g:32049
- Bismut, Jean-Michel (with Bost, Jean-Benoît) Fibrés déterminants, métriques de Quillen et dégénérescence des courbes. [Determinant bundles, Quillen metrics and degeneration of curves] 91h:58122
- (with Gillet, Henri; Soulé, Christophe) Bott-Chern currents and complex immersions. 91d:58239
- Bost, Jean-Benoît Green's currents and height pairing on complex tori. 91m:14034
- see also Bismut, Jean-Michel, 91h:58122
- Dickenstein, Alicia (with Sessa, Carmen) Nilpotent orders of analytic ideals. 91e:32007
- Gillet, Henri see Bismut, Jean-Michel; et al., 91d:58239
- Kaneko, Hiroshi<sup>2</sup> Regular diffusion processes on complex manifolds and plurisubharmonic functions. 91g:60091
- Lombard, Ph. Complexes de formes-courants. [Complexes of current forms] 91f:58006
- Maire, H.-M. see Bartel, Daniel, 91g:32049
- Raby, Gilles Paramétrix, cohomologie et formes méromorphes. [Parametrix, cohomology and meromorphic forms] 91g:32011
- Runkin, L. I. Jensen's theorem for holomorphic almost-periodic mappings. 91m:32027
- Sessa, Carmen see Dickenstein, Alicia, 91e:32007
- Soulé, Christophe see Bismut, Jean-Michel; et al., 91d:58239

## 32C35 Analytic sheaves and cohomology groups [see also 14Fxx, 18F20, 55N30]

- Putinar, Mihai Une caractérisation des modules analytiques quasi cohérents. (English summary) [A characterization of quasicohherent analytic modules] 91f:32007

## Items with secondary classifications in 32C35

- Bastin, Françoise (with Schneiders, Jean-Pierre) On Cartan's A & B theorems. 91i:32014
- Coen, Salvatore Finite representations of 1 in certain function algebras. 91e:32010
- Ito, Yoshifumi Theory of (vector valued) Fourier hyperfunctions. Their realization as boundary values of (vector valued) slowly increasing holomorphic functions. III. 91a:32007
- Nagamachi, S. see Nishimura, Takeshi, 91i:32003
- Nishimura, Takeshi (with Nagamachi, S.) An approximation theorem of Runge type and its applications to the theory of Fourier hyperfunctions. 91i:32003
- Ofman, Salomon  $d^d$ - et  $d^d$ -cohomologies d'une variété compacte privée d'un point. Application à l'intégration sur les cycles. II. (English summary) [ $d^d$ - and  $d^d$ -cohomologies of a compact manifold with one puncture. Application to the integration of cycles. II] 91a:32013
- Putinar, Mihai Spectral theory and sheaf theory. IV. 91k:47072
- Schapiro, Pierre (with Trépreau, Jean-Marie) Microlocal pseudoconvexity and "edge of the wedge" theorem. 91f:32019
- Schneiders, Jean-Pierre see Bastin, Françoise, 91i:32014
- Trépreau, Jean-Marie see Schapiro, Pierre, 91f:32019
- Watanabe, Kiyoshi Cousin domains in 3-dimensional projective space. 91i:32016

## 32C36 Local cohomology of analytic spaces

## Items with secondary classifications in 32C36

- Arapura, Donu Local cohomology of sheaves of differential forms and Hodge theory. 91i:14016
- Coltoia, Mihnea Recouvrements de Stein finis pour les espaces complexes. (English summary) [Finite Stein coverings for complex spaces] 91h:32013
- Kosarew, Siegmund (with Pternell, Thomas) Formal cohomology, analytic cohomology and nonalgebraic manifolds. 91g:32035
- Pternell, Thomas see Kosarew, Siegmund, 91g:32035
- Raby, Gilles Paramétrix, cohomologie et formes méromorphes. [Parametrix, cohomology and meromorphic forms] 91g:32011

## 32C37 Duality theorems

- Baran, A. Remarks on duality for complex spaces. 91g:32013



## Items with secondary classifications in 32C37

- Berkovich, Vladimir G. ★ Spectral theory and analytic geometry over non-Archimedean fields. 91k:32038
- Kosarew, Siegmund (with Peterzell, Thomas) Formal cohomology, analytic cohomology and nonalgebraic manifolds. 91g:32035
- Peterzell, Thomas see Kosarew, Siegmund, 91g:32035
- Saito, Morihiko Induced  $\mathcal{D}$ -modules and differential complexes. (French summary) 91f:32008

### 32C38 Sheaves of differential operators and their modules

[see also 14F10, 16S32, 35A27, 58G07]

- van Doorn, M. G. M. Vanishing cycles and  $\mathcal{D}$ -modules. 91a:32014
- Hénaut, Alain  $\mathcal{D}$ -modules et géométrie des tissus de  $\mathbb{C}^2$ . [ $\mathcal{D}$ -modules and geometry of webs in  $\mathbb{C}^2$ ] 91i:32007
- Kapranov, M. M. Nonholonomic  $\mathcal{D}$ -modules and nonconstructive perverse sheaves. 91c:32008
- Lunts, Valery Algebraic varieties preserved by generic flows. 91a:32015
- Mebkhout, Zoghman Le théorème de comparaison entre cohomologies de de Rham d'une variété algébrique complexe et le théorème d'existence de Riemann. [The comparison theorem between de Rham cohomologies of a complex algebraic variety and Riemann's existence theorem] 91a:32016
- Sabbah, Claude Modules d'Alexander et  $\mathcal{D}$ -modules. [Alexander modules and  $\mathcal{D}$ -modules] 91i:32008
- Saito, Morihiko Induced  $\mathcal{D}$ -modules and differential complexes. (French summary) 91f:32008
- Schapira, Pierre (with Schneiders, Jean-Pierre) Paires elliptiques. I. Finitude et dualité. (English summary) [Elliptic pairs. I. Finiteness and duality] 91i:32009
- Vanishing in highest degree for solutions of  $\mathcal{D}$ -modules and perverse sheaves. 91i:32010
- Schneiders, Jean-Pierre see Schapira, Pierre, 91i:32009
- Sibuya, Yasutaka Some results concerning injectivity of  $\mathcal{D}$ -modules. II. 91j:32010

## Items with secondary classifications in 32C38

- Bondal, A. I. (with Kapranov, M. M.) Representable functors, Serre functors, and reconstructions. 91b:14013
- Borho, W. (with Brylinski, Jean-Luc; MacPherson, R.) ★ Nilpotent orbits, primitive ideals, and characteristic classes. 91d:17012
- Brylinski, Jean-Luc see Borho, W.; et al., 91d:17012
- D'Agnolo, Andrea (with Schapira, Pierre) Un théorème d'image inverse pour les faisceaux. Applications au problème de Cauchy. (English summary) [An inverse image theorem for sheaves. Applications to the Cauchy problem] 91m:58149
- Källström, Rolf Meromorphic extensions of regular holonomic distributions. 91c:58127
- Kapranov, M. M. see Bondal, A. I., 91b:14013
- Li, Hai Shi (with Van Oystaeyen, Freddy) Strongly filtered rings applied to Gabber's integrability theorem and modules with regular singularities. 91b:16052
- MacPherson, R. see Borho, W.; et al., 91d:17012
- Manin, Yu. I. Neveu-Schwarz sheaves and differential equations for Mumford superforms. 91b:32036
- Saito, Morihiko Decomposition theorem for proper Kähler morphisms. 91j:32042
- Sato, Mikio  $\mathcal{D}$ -modules and nonlinear systems. 91m:58150
- Schapira, Pierre see D'Agnolo, Andrea, 91m:58149
- Struppa, Daniele C. Geometric aspects in algebraic analysis. (Italian. English summary) 91c:58178
- Suwa, Tatsuo  $\mathcal{D}$ -modules associated to complex analytic singular foliations. 91f:32036
- Takasaki, Kanehisa Integrable systems as deformations of  $\mathcal{D}$ -modules. 91c:58079
- Differential algebras and  $\mathcal{D}$ -modules in super Toda lattice hierarchy. 91g:58133
- Van Oystaeyen, Freddy see Li, Hai Shi, 91b:16052
- Wagner, Peter<sup>2</sup> Bernstein-Sato-Polynome und Faltungsgruppen zu Differentialoperatoren. (English and Russian summaries) [Bernstein-Sato polynomials and convolution groups for differential operators] 91c:58129

### 32C81 Applications to physics

## Items with secondary classifications in 32C81

- Nash, Charles Sheaf cohomology and functional integration. 91h:58019
- Van Proeyen, Antoine see de Wit, B., 91m:81274
- de Wit, B. (with Van Proeyen, Antoine) Symmetries of dual-quaternionic manifolds. 91m:81274

### 32Dxx Analytic continuation

#### 32D05 Domains of holomorphy

- Khudaberganov, G. Power series and holomorphic functions of several matrices. (Russian. Serbo-Croatian summary) 91m:32010
- Ryan, John Cells of harmonicity and generalized Cauchy integral formulae. 91g:32014
- Taniguchi, Setsuo Explosion problem for holomorphic diffusion processes and its applications. 91a:32017

## Items with secondary classifications in 32D05

- Ryan, John Complex Clifford analysis and domains of holomorphy. 91g:30054
- Watanabe, Kiyoshi Cousin domains in 3-dimensional projective space. 91i:32016
- Znamenskaya, L. N. A criterion for holomorphic continuability of functions of the class  $\mathcal{L}^p$  that are given on part of the Shilov boundary of circular strongly star-like domains. 91k:32010

#### 32D10 Envelopes of holomorphy

- Casadio Tarabusi, Enrico On holomorphic retractions of domains in Stein manifolds. (Italian summary) 91i:32011
- Sacré, Christine Enveloppe d'holomorphic d'un domaine tube de  $\mathbb{C}^m \times \mathbb{C}^n$  à fibres connexes. (English summary) [Envelope of holomorphy of a tube domain in  $\mathbb{C}^m \times \mathbb{C}^n$  with connected fibers] 91d:32017

#### 32D15 Continuation of analytic objects

- Adachi, Kenzō Continuation of bounded holomorphic functions on Stein manifolds. 91i:32012
- Amar, E. On the extension of C.R. functions. 91m:32011
- Chen, Zhi Hua see Han, Zu Hong, 91f:32009
- Han, Zu Hong (with Chen, Zhi Hua) Holomorphic extension of CR functions near a point of higher type. (Chinese) 91f:32009
- Hatziafratis, Telemachos E. Explicit  $\bar{\partial}$ -primitives of Henkin-Leitner kernels on Stein manifolds. 91m:32012
- Hounie, Jorge (with Tavares, Joaquim) The Hartogs property for tube structures. 91k:32009
- Ivashkovich, S. M. Extension of line bundles and holomorphic maps. (Serbo-Croatian summary) 91c:32010
- Nakano, Shigeo Extension of holomorphic functions with growth conditions. II. 91i:32013
- Shiffman, Bernard Separate analyticity and Hartogs theorems. 91a:32018
- Hartogs theorems for separately holomorphic mappings into complex spaces. (French summary) 91h:32008
- Tavares, Joaquim see Hounie, Jorge, 91k:32009
- Tumanov, A. E. Extension of CR-functions into a wedge. (Russian) 91f:32010
- Ye, Zaili The envelope of holomorphy of a truncated tube. 91d:32018
- Znamenskaya, L. N. A criterion for holomorphic continuability of functions of the class  $\mathcal{L}^p$  that are given on part of the Shilov boundary of circular strongly star-like domains. 91k:32010

## Items with secondary classifications in 32D15

- Adachi, Kenzō  $H^1$  estimates for extensions of holomorphic functions in certain pseudoconvex domains. 91h:32003
- Chinak, M. A. Meromorphic mappings that compress pseudovolume elements. (Russian) 91d:32031
- Dioussy, G. Analyticité séparée et prolongement analytique. [Separate analyticity and analytic continuation] 91i:32005
- Kawai, Takahiro (with Struppa, Daniele C.) On the existence of holomorphic solutions of systems of linear differential equations of infinite order and with constant coefficients. 91j:32044
- Ryan, John Cells of harmonicity and generalized Cauchy integral formulae. 91g:32014
- Słodkowski, Zbigniew Polynomial hulls in  $\mathbb{C}^2$  and quasicircles. 91m:32016
- Struppa, Daniele C. see Kawai, Takahiro, 91j:32044

#### 32D20 Removable singularities

- Kytmanov, A. M. Holomorphic continuation of integrable CR-functions from a part of the boundary of the domain. 91j:32011
- Lupacolo, Guido On the removal of singular sets for the tangential Cauchy-Riemann operator. 91f:32011
- Meromorphic continuation in projective space. (Italian summary) 91m:32013
- Stout, Edgar Lee Removable sets for holomorphic functions of several complex variables. 91f:32012
- Struppa, Daniele C. Hartogs' type theorems for solutions of convolution equations. (Italian summary) 91i:32011

## Items with secondary classifications in 32D20

- Ivashkovich, S. M. Extension of line bundles and holomorphic maps. (Serbo-Croatian summary) 91c:32010
- Kaneko, Akira Hartogs type extension theorem of real analytic solutions of linear partial differential equations with constant coefficients. (see 91h:46003)
- Li, Bang He (with Li, Ya Qing) Analytic and harmonic continuations and distributions. 91d:46045
- Li, Ya Qing see Li, Bang He, 91d:46045
- Ribbens, Juhani A nullset for normal functions in several variables. 91c:32002

#### 32D99 None of the above, but in this section

## Items with secondary classifications in 32D99

- Bui Duc Tac see Nguyễn Văn Khuê, 91d:46051
- Lê Mậu Hải On Barth-Rossi theorem for meromorphic maps. 91a:32033
- Nguyễn Văn Khuê (with Bui Duc Tac) Extending holomorphic maps from compact sets in infinite dimensions. 91d:46051
- Znamenskii, S. V. Tomography in spaces of analytic functionals. 91f:32014

#### 32Exx Holomorphic convexity

##### 32E05 Holomorphically convex complex spaces, reduction theory

- Kimura, Ikko On holomorphically convex hulls. 91m:32014
- Napier, Terrence Convexity properties of coverings of smooth projective varieties. 91g:32015

## Items with secondary classifications in 32E05

- Narasimhan, Raghavan The Levi problem on algebraic manifolds. 91c:32026
- Zhou, Xiang Yu On matrix Reinhardt domains. 91c:32002

## 32E10 Stein spaces, Stein manifolds

- Aytuna, Aydin Stein spaces  $M$  for which  $\mathcal{O}(M)$  is isomorphic to a power series space. 91m:32015
- Bastin, Françoise (with Schneiders, Jean-Pierre) On Cartan's A & B theorems. 91i:32014
- Eliašberg, Ya. M. Topological characterization of Stein manifolds of dimension  $> 2$ . 91i:32012
- Liu, Qing Sur les espaces de Stein quasi-compacts en géométrie rigide. [On quasicompact Stein spaces in rigid geometry] 91i:32015
- Schneiders, Jean-Pierre see Bastin, Françoise, 91i:32014
- Shon, Kwang Ho Global holomorphic solutions of differential equations with a parameter in a Stein manifold. 91d:32019
- Watanabe, Kiyoshi Cousin domains in 3-dimensional projective space. 91i:32016
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- Pöhlmann, Thomas Die Starrheit des 3-dimensionalen projektiven Raums und der 3-dimensionalen Quadrik. [On the rigidity of the 3-dimensional projective space and the 3-dimensional quadric] 91g:32020

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 Hakim, Monique Applications holomorphes propres continues de domaines strictement pseudoconvexes de  $\mathbb{C}^n$  dans la boule unité de  $\mathbb{C}^{n+1}$ . [Continuous proper holomorphic mappings of strictly pseudoconvex domains of  $\mathbb{C}^n$  into the unit ball of  $\mathbb{C}^{n+1}$ ] 91d:32035  
 Lin, E. B. (with Wong, Bun) Boundary localization of the normal family of holomorphic mappings and remarks on existence of bounded holomorphic functions on complex manifolds. 91c:32021  
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### 32H50 Iteration problems

- Abate, Marco (with Vigué, Jean-Pierre) Common fixed points in hyperbolic Riemann surfaces and convex domains. 91h:32027

- Kuczumow, Tadeusz (with Stachura, Adam) Iterates of holomorphic and  $k_0$ -nonexpansive mappings in convex domains in  $\mathbb{C}^n$ . 91d:32037  
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### 32H99 None of the above, but in this section

- Couty, Danielle Formes réduites des automorphismes analytiques de  $\mathbb{C}^n$  à variété linéaire fixe et répulsive. [Reduced forms of analytic automorphisms of  $\mathbb{C}^n$  with fixed and repulsive linear manifold] 91c:32022  
 Lin, Qing A structure theorem for holomorphic curves in  $\text{Gr}(3, \mathbb{C}^6)$ . 91f:32031

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- Abd-Alla, Mohamed L'ensemble des points fixes d'une application holomorphe dans un produit fini de boules-unités d'espaces de Hilbert est une sous-variété banachique complexe. (English summary) [The set of fixed points of a holomorphic mapping into a finite product of unit balls of Hilbert spaces is a complex Banach submanifold] 91e:58017  
 Gustafsson, Björn (with Peetre, Jaak) Notes on projective structures on complex manifolds. 91d:32046  
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### 32Jxx Compact analytic spaces {For Riemann surfaces, see 14Hxx, 30Fxx; for algebraic theory, see 14Jxx.}

#### 32J05 Compactification of analytic spaces

- Kosarew, Siegmund (with Peterzell, Thomas) Formal cohomology, analytic cohomology and nonalgebraic manifolds. 91g:32035  
 Müller-Stach, Stefan Compactifications of  $\mathbb{C}^1$  with reducible boundary divisor. 91a:32038  
 Nadel, Alan Michael On complex manifolds which can be compactified by adding finitely many points. 91g:32036  
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- Bennett, Curtis (with Miranda, Rick) The automorphism groups of the hyperelliptic surfaces. 91g:32037  
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 Gelhaus, Ch. (with Heinzer, P.) Komplexe Flächen mit holomorphen Vektorfeldern. [Complex surfaces with holomorphic vector fields] 91k:32027  
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 Li, Jun (with Yau, Shing-Tung; Zheng, Fang Yang) A simple proof of Bogomolov's theorem on class VII<sub>0</sub> surfaces with  $b_2 = 0$ . 91c:32023  
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 Zheng, Fang Yang *see* Li, Jun; et al., 91c:32023

#### Items with secondary classifications in 32J15

- Donaldson, Simon K. @Geometry of four-manifolds. 91e:57053  
 Holzapfel, R.-P. An effective finiteness theorem for ball lattices. 91m:14057  
 (James, I. M.) *see* Donaldson, Simon K., 91e:57053  
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 Zaidenberg, M. G. Tests for hyperbolicity and families of curves. 91a:32044  
 — A function field analogue of Mordell's conjecture: noncompact version. 91a:32045

#### 32J17 Compact 3-folds

- Kato, Masahide Factorization of compact complex 3-folds which admit certain projective structures. 91g:32038

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- Borcea, Ciprian Homogeneous vector bundles and families of Calabi-Yau threefolds. 91k:14029  
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- (with Lynker, Monika; Schimmrigk, Rolf) Calabi-Yau manifolds in weighted  $P_4$ . 91m:14062
- (with de la Ossa, Xenia C.) Comments on conifolds. 91m:32018
- see also He, Anning, 91j:14032
- Green, Paul S. Singular degenerations of Calabi-Yau manifolds and the Weil-Petersson metric. 91j:32019
- He, Anning (with Candelas, Philip) On the number of complete intersection Calabi-Yau manifolds. 91j:14032
- Hübsch, Tristan see Candelas, Philip; et al., 91k:32021
- Hunt, Bruce A bound on the Euler number for certain Calabi-Yau 3-folds. 91j:14033
- Kosarew, Siegmund (with Peternell, Thomas) Formal cohomology, analytic cohomology and nonalgebraic manifolds. 91g:32035
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- de la Ossa, Xenia C. see Candelas, Philip, 91m:32018
- Peternell, Thomas Compactifications of  $C^3$ . III. 91m:32028
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- Pontecorvo, Massimiliano Hermitian surfaces and a twistor space of algebraic dimension 2. 91k:32028
- Schimmrigk, Rolf see Candelas, Philip; et al., 91k:32021 and 91m:14062
- Yüan, Hsi Shih On Calabi-Yau orbifolds in weighted projective spaces. 91m:14064

### 32J18 Compact $n$ -folds ( $n \geq 4$ )

- Lihogher, Anatoly S. (with Wood, John W.) Uniqueness of the complex structure on Kähler manifolds of certain homotopy types. 91g:32039
- Wood, John W. see Lihogher, Anatoly S., 91g:32039

#### Items with secondary classifications in 32J18

- Fujimoto, Yoshio Logarithmic transformations on elliptic fiber spaces. II. Elliptic bundle case. 91j:32029

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- Campana, Frédéric Critère de projectivité de la transformation élémentaire d'une variété projective de dimension 3. (English summary) [Projectivity criteria for the elementary transform of a projective threefold] 91f:32033
- (with Schumacher, Georg) A geometric algebraicity property for moduli spaces of compact Kähler manifolds with  $h^{2,0} = 1$ . 91d:32039
- Pontecorvo, Massimiliano Hermitian surfaces and a twistor space of algebraic dimension 2. 91k:32028
- Schumacher, Georg see Campana, Frédéric, 91d:32039

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- Mok, Ngaiming An embedding theorem of complete Kähler manifolds of positive Ricci curvature onto quasi-projective varieties. 91b:32084
- Poon, Yat Sun Twistor spaces with meromorphic functions. 91f:32032

### 32J25 Transcendental methods of algebraic geometry [see also 14C30]

- Azhari, Abdelhak Sur la conjecture de Chudnovsky-Demailly et les singularités des hypersurfaces algébriques. (English summary) [On the Chudnovsky-Demailly conjecture and singularities of algebraic hypersurfaces] 91e:32025
- Fujimoto, Yoshio Logarithmic transformations on elliptic fiber spaces. II. Elliptic bundle case. 91j:32029
- Kashiwara, Masaki (with Kawai, Takahiro) A particular partition of unity: an auxiliary tool in Hodge theory. 91c:32024
- Kawai, Takahiro see Kashiwara, Masaki, 91c:32024
- Saito, Morihiko Mixed Hodge modules and admissible variations. (French summary) 91i:32029

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- Arapura, Donn Hodge theory with local coefficients on compact varieties. 91m:32037
- Bost, Jean-Benoît Green's currents and height pairing on complex tori. 91m:14034
- Brylinski, Jean-Luc (with Zucker, Steven M.) An overview of recent advances in Hodge theory. 91m:14010
- Cattani, Eduardo (with Kaplan, Aroldo) Degenerating variations of Hodge structure. 91k:32019
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- Kurchanov, P. V. see Kulikov, Vik. S., 91k:14010
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- Peters, Chris A. M. Rigidity for variations of Hodge structure and Arakelov-type finiteness theorems. 91e:14010
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- Saito, Masa-Hiko (with Zucker, Steven M.) Classification of nonrigid families of  $K3$  surfaces and a finiteness theorem of Arakelov type. 91k:14024
- Saito, Morihiko Introduction to mixed Hodge modules. 91j:32041
- (with Zucker, Steven M.) The kernel spectral sequence of vanishing cycles. 91m:32041
- Mixed Hodge modules. 91m:14014
- Decomposition theorem for proper Kähler morphisms. 91j:32042
- Terasama, Tomohide Infinitesimal variation of Hodge structures and the weak global Torelli theorem for complete intersections. 91g:14007

- Voisin, Claire Degenerations de Lefschetz et variations de structures de Hodge. [Lefschetz degenerations and variations of Hodge structure] 91c:32016
- Zucker, Steven M. see Saito, Masa-Hiko, 91k:14024; Brylinski, Jean-Luc, 91m:14010 and Saito, Morihiko, 91m:32041

### 32J27 Compact Kähler manifolds: generalizations, classification

#### Items with secondary classifications in 32J27

- Burns, Daniel M., Jr. (with Burstall, Francis E.; De Bartolomeis, P.; Rawnsley, John H.) Stability of harmonic maps of Kähler manifolds. 91b:58044
- Burstall, Francis E. see Burns, Daniel M., Jr.; et al., 91b:58044
- De Bartolomeis, P. see Burns, Daniel M., Jr.; et al., 91b:58044
- Rawnsley, John H. see Burns, Daniel M., Jr.; et al., 91b:58044

### 32J81 Applications to physics

- Lynker, Monika (with Schimmrigk, Rolf) ADE quantum Calabi-Yau manifolds. 91m:32030
- Schimmrigk, Rolf see Lynker, Monika, 91m:32030

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- Aspinwall, P. S. (2, 2)-superconformal field theories near orbifold points. 91c:14049
- Candelas, Philip (with Hübsch, Tristan; Schimmrigk, Rolf) Relation between the Weil-Petersson and Zamolodchikov metrics. 91k:32021
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- Cecotti, S.  $N = 2$  supergravity, type IIB superstrings, and algebraic geometry. 91g:32023
- He, Anning (with Candelas, Philip) On the number of complete intersection Calabi-Yau manifolds. 91j:14032
- Hübsch, Tristan see Candelas, Philip; et al., 91k:32021
- Schimmrigk, Rolf see Candelas, Philip; et al., 91k:32021

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- Kereselidze, A. R. see Volkov, G. G.; et al., 91d:81161
- Liparteliani, A. G. see Volkov, G. G.; et al., 91d:81161
- Masterson, John T. Branched structures associated with Lamé's equation. 91k:58106
- Volkov, G. G. (with Kereselidze, A. R.; Liparteliani, A. G.) Left-right-symmetric, superstring-inspired models. 91d:81161

### 32Kxx Generalizations of analytic spaces (should also be assigned at least one other classification number in this section)

### 32K15 Differentiable functions on analytic spaces, differentiable spaces [see also 58C25]

- Horwitz, Alan L. Differentially analytic functions. 91g:32040

### 32K99 None of the above, but in this section

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- Nachbin, Leopoldo Some aspects and problems in holomorphy. 91e:46056
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### 32Lxx Holomorphic fiber spaces [see also 55Rxx]

### 32L05 Holomorphic fiber bundles and generalizations

- Bouche, Thierry Convergence de la métrique de Fubini-Study d'un fibré linéaire positif. (English summary) [Convergence of the Fubini-Study metric of a positive linear bundle] 91d:32040
- Giordano, G. K. Holomorphic connections on vector bundles and the Riemann-Hilbert problem. (Russian. English and Georgian summaries) 91c:32025
- Meziani, A. On the integrability of singular differential forms in two complex variables. 91a:32040
- Toma, Matei Une classe de fibrés vectoriels holomorphes sur les 2-tores complexes. (English summary) [A class of holomorphic vector bundles on two-dimensional complex tori] 91j:32030
- Items with secondary classifications in 32L05
- Arnal, D. (with Cahen, M.; Gutt, S.) Representation of compact Lie groups and quantization by deformation. 91a:58068
- Ballico, Edoardo On ample and spanned rank-3 bundles with low Chern numbers. 91g:14037
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- Filali, Khalid Étude des fonctions méromorphes sur certains espaces fibrés. [A study of meromorphic functions on some fiber spaces] 91a:32042
- Gillet, Henri see Bismut, Jean-Michel; et al., 91d:58239

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— On a set of polarized Kähler metrics on algebraic manifolds. 91j:32031

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Bando, Shigetoshi (with Kobayashi, Ryoichi) Ricci-flat Kähler metrics on affine algebraic manifolds. II. 91g:53068

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Lin, E. B. (with Wong, Bun) Curvature and proper holomorphic mappings between bounded domains in  $\mathbb{C}^n$ . 91k:32026

Nadel, Alan Michael Semisimplicity of the group of biholomorphisms of the universal covering of a compact complex manifold with ample canonical bundle. 91f:32038

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### 32L10 Sheaves and cohomology of sections of holomorphic vector bundles, general results [see also 14F05, 18F20, 55N30]

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Usa, Takeshi  $L$ -valued 1-jet of Rham complexes and their induced spectral sequences. 91k:32030

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Bismut, Jean-Michel (with Lebeau, Gilles) Immersions complexes et métriques de Quillen. (English summary) [Complex immersions and Quillen metrics] 91k:58138

— (with Vasserot, Eric) The asymptotics of the Ray-Singer analytic torsion associated with high powers of a positive line bundle. 91c:58141

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— Superconnection currents and complex immersions. 91b:58240

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— (with Soulé, Christophe) Un théorème de Riemann-Roch-Grothendieck arithmétique. (English summary) [An arithmetic Riemann-Roch-Grothendieck theorem] 91m:14031

— (with Soulé, Christophe) Characteristic classes for algebraic vector bundles with Hermitian metric. I. 91m:14032a

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### 32L20 Vanishing theorems

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Arapura, Donu Local cohomology of sheaves of differential forms and Hodge theory. 91h:14016

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Kosarew, Ingrid (with Kosarew, Siegmund) Kodaira vanishing theorems on noncomplete algebraic manifolds. 91j:14012

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Manivel, Laurent Un exemple de non-dégénérescence en  $E_2$  de la suite spectrale de Borel-Le Potier. (English summary) [An example of  $E_2$  nondegeneracy of the Borel-Le Potier spectral sequence] 91e:14016

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### 32L25 Twistor theory, double fibrations

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— (with Solomon, Sorin) (Super-) field theories from (super-) twistors. 91a:81209

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Kruskal, Bernd Small resolutions of double solids, branched over a 13-nodal quartic surface. 91b:14011

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Mantial, Lisa A. An  $L^2$ -cohomology construction of unitary highest weight modules for  $U(p, q)$ . 91e:22018

Marbes, Heinz On the set of umbilical points of a twistor-holomorphic immersion into  $\mathbb{R}^4$ . 91a:53085

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- Nair, V. P. (with Schiff, Jeremy) Topological gauge theory and twistors. 91f:81052  
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- Aripov, R. G. Generators of the differential field of invariant rational functions of a finite number of paths for the action of the group  $O(3, C)$  in  $C^3$  and the separation of orbits in general position. (Russian) (see 91b:00031)  
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- Nadel, Alan Michael Semisimplicity of the group of biholomorphisms of the universal covering of a compact complex manifold with ample canonical bundle. 91f:32038
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- Agranovskii, M. L. Errata: "Möbius spaces of functions on the Shilov boundaries of classical domains of tube type" [Sibirsk. Mat. Zh. 29 (1988), no. 5, 11–23; MR 90c:32048] by Agranovskii and "Maximal invariant spaces of analytic functions" [Indiana Univ. Math. J. 31 (1982), no. 5, 651–663; MR 84d:32022] by R. M. Timoney. 91k:32035
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- *see also* Burns, Daniel M., Jr.; et al., 91b:58044
- Cao, Hual Dong (with Mok, Ngaiming) Holomorphic immersions between compact hyperbolic space forms. 91a:32031
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#### 32Nxx Automorphic functions [see also 11Fxx, 20H10, 22E40, 30F35]

#### 32N05 General theory of automorphic functions of several complex variables

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- Harris, Michael Automorphic forms of  $\bar{\partial}$ -cohomology type as coherent cohomology classes. 91g:11064
- Hatada, Kazuyuki On the action of Hecke rings on homology groups of smooth compactifications of Siegel modular varieties and Siegel cusp forms. 91i:11051
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## 32P05 Non-Archimedean complex analysis (should also be assigned at least one other classification number from Section 32 describing the type of problem)

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- Drewes, R. Infinitesimal Deformationen von Kegeln über transkanonisch eingebetteten hyperelliptischen Kurven. [Infinitesimal deformations of cones over transcanonically embedded hyperelliptic curves] 91c:14003
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- Martin, Bernd (with Pfister, Gerhard) The kernel of the Kodaira-Spencer map of the versal  $\mu$ -constant deformation of an irreducible plane curve singularity with  $C^*$ -action. 91c:14005
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### 32S40 Monodromy; relations with differential equations and $D$ -modules

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- Cassou-Noguès, Pierrette Entrelacs toriques itérés et intégrales associées à une courbe plane. [Iterated torus links and integrals associated with a plane curve] 91k:32043  
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### 32S60 Stratifications; constructible sheaves; intersection cohomology [see also 58C27]

- Hardt, Robert (with Sullivan, Dennis) Variation of the Green function on Riemann surfaces and Whitney's holomorphic stratification conjecture. 91d:32054  
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### 32S70 Other operations on singularities

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## 33-XX Special functions {33-XX deals with the properties of functions as functions. For orthogonal functions, see also 42Cxx; for aspects of combinatorics, see 05Axx; for number-theoretic aspects, see 11-XX; for representation theory, see 22Exx.}

### 33-00 General reference works (handbooks, dictionaries, bibliographies, etc.)

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Items with secondary classifications in 33-00

Askey, Richard Handbooks of special functions. 91b:33001

Oberhettinger, F. ★ Tables of Fourier transforms and Fourier transforms of distributions. 91g:00010

### 33-01 Instructional exposition (textbooks, tutorial papers, etc.)

Items with secondary classifications in 33-01

Achuthan, P. (with Ponnuswamy, S.; Sundar, S.) On certain special functions, continued fractions and Padé approximants. 91c:33028

(Askey, Richard) *see* Gasper, George, 91d:33034

Gasper, George (with Rahman, Mizan) ★ Basic hypergeometric series. 91d:33034

Ponnuswamy, S. *see* Achuthan, P.; et al., 91c:33028

Rahman, Mizan *see* Gasper, George, 91d:33034

Stanton, Dennis An introduction to group representations and orthogonal polynomials. (*see* 91k:00039)

Sundar, S. *see* Achuthan, P.; et al., 91c:33028

Torres del Castillo, G. F. An introduction to spin-weighted spherical harmonics. (Spanish. English summary) (Not in MR)

### 33-02 Research exposition (monographs, survey articles)

Guo, Dun Ren *see* Wang, Z. X., 91a:33001

Wang, Z. X. (with Guo, Dun Ren) ★ Special functions. 91a:33001

(Xia, X. J.) *see* Wang, Z. X., 91a:33001

Items with secondary classifications in 33-02

(Andrews, George E.) *see* Fine, Nathan J., 91j:33011

(Askey, Richard) *see* Gasper, George, 91d:33034

Fine, Nathan J. ★ Basic hypergeometric series and applications. 91j:33011

Gasper, George (with Rahman, Mizan) ★ Basic hypergeometric series. 91d:33034

Milne, S. C. The multidimensional  $\Psi_1$  sum and Macdonald identities for  $A_1^{(1)}$ . 91f:33011

Nevai, Paul Research problems in orthogonal polynomials. 91m:42023

Pandey, G. S. Jacobi polynomials and approximation of functions in Banach spaces. 91c:33015

Rahman, Mizan *see* Gasper, George, 91d:33034

(Ramanujan, Srinivasa) *see* Venkatchalingar, K., 91b:33025

Saigo, Megumi On behaviors of hypergeometric series of one, two, three and  $n$  variables near boundaries of their convergence regions of logarithmic case. 91b:33018

(Soundararajan, T.) *see* Venkatchalingar, K., 91b:33025

Venkatchalingar, K. ★ Development of elliptic functions according to Ramanujan. 91b:33025

### 33-03 Historical (must also be assigned at least one classification number from Section 01)

Askey, Richard Handbooks of special functions. 91b:33001

Items with secondary classifications in 33-03

Lauckan, Eberhard Spezielle Funktionen der mathematischen Physik—gestern und heute. [Special functions of mathematical physics—yesterday and today] (Not in MR)

### 33-04 Explicit machine computation and programs (not the theory of computation or programming)

Wegner, T. An analytical method for calculation of integrals appearing in approximate solutions of deformable body mechanics. 91j:33001

Items with secondary classifications in 33-04

Carlson, B. C. Landen transformations of integrals. 91m:33026

### 33-06 Proceedings, conferences, collections, etc.

(Mathai, A. M.) *see* Proceedings: Symposium on Special Functions and Problem-oriented Research, 91g:33001

Items listed otherwise than by author

Proceedings:

Symposium on Special Functions and Problem-oriented Research ★ Proceedings of the Symposium on Special Functions and Problem-oriented Research. 91g:33001

Symposium:

Special Functions and Problem-oriented Research ★ Proceedings of the Symposium on Special Functions and Problem-oriented Research. 91g:33001

Trivandrum ★ Proceedings of the Symposium on Special Functions and Problem-oriented Research. 91g:33001

### 33A35 Generalized hypergeometric functions of one and several variables ( $E$ -functions, $G$ -functions, $H$ -functions, etc.) (1985)

Items with secondary classifications in 33A35

Bajpai, S. D. (with Mishra, Sadhana) Meijer's  $G$ -function and heat conduction in a rod under Robin condition. (Hindi. English summary) (Not in MR)

Mishra, Sadhana *see* Bajpai, S. D., (Not in MR)

### 33A40 Cylindrical functions, Bessel functions (1985)

Items with secondary classifications in 33A40

Mărieș, V. A. Numerical computation of some Bessel functions of the second kind and their derivatives. (Romanian. French summary) (Not in MR)

### 33A45 Spherical functions (Legendre polynomials and functions, spherical harmonics), ultraspherical polynomials (1985)

Dhillon, Saroop Singh *see* Shrivastava, P. N., (Not in MR)

Shrivastava, P. N. (with Dhillon, Saroop Singh) Operational formula associated with a function defined by a generalized Rodrigues formula. (Not in MR)

Torres del Castillo, G. F. An introduction to spin-weighted spherical harmonics. (Spanish. English summary) (Not in MR)

### 33A65 Orthogonal special functions and polynomials (Chebyshev, Hermite, Jacobi, Laguerre, etc.) (1985)

Items with secondary classifications in 33A65

Mirolyubov, A. A. (with Nasonova, N. V.) On an integral equation. (Russian) (*see* 91b:34004)

Nasonova, N. V. *see* Mirolyubov, A. A., (91b:34004)

Popov, Blagoj S. A note on orthogonal polynomials. (Macedonian summary) (Not in MR)

## 33Bxx Elementary classical functions

### 33B10 Exponential and trigonometric functions

Cosgrove, C. *see* Glasser, M. L., (Not in MR)

Glasser, M. L. (with Cosgrove, C.) Erratum: "Mallows' integral and some generalizations" [J. Math. Anal. Appl. 139 (1989), no. 2, 533–536; MR 90h:33002]. (Not in MR)

Obald, S. A. Two new trigonometric formulas with applications. 91c:33002

Tanno, Shukichi Integrals of some trigonometric functions. 91g:33002

Zeng, Jiang The first sign change of a cosine polynomial. 91f:33001

Items with secondary classifications in 33B10

Kheifets, A. I. Explicit formulas for the roots of the equation  $\sqrt{a^2 - z^2} \operatorname{tg} z = bz$ . (Russian) 91a:65044

Shackell, John Asymptotic estimation of oscillating functions using an interval calculus. 91c:65067

Weinstock, Robert Elementary evaluations of  $\int_0^\infty e^{-x^2} dx$ ,  $\int_0^\infty \cos x^2 dx$ , and  $\int_0^\infty \sin x^2 dx$ . 91c:26004

### 33B15 Gamma, beta and polygamma functions

Finsterer, A. *see* Schäffe, F. W., 91c:33003

Garvan, Frank G. A proof of the Macdonald-Morris root system conjecture for  $F_4$ . 91d:33001

Kalla, R. N. Fractional calculus and bilateral expansions of incomplete beta and elliptic functions. (Not in MR)

Schäffe, F. W. (with Finsterer, A.) On Lindelöf's error bound for Stirling's series. 91c:33003

Somasundaram, D. On a formula of Ramanujan. 91a:33002

## Items with secondary classifications in 33B15

- Cosgrove, C. *see* Glasser, M. L., (Not in MR)  
 Dowker, J. S. (with Schofield, J. P.) Conformal transformations and the effective action in the presence of boundaries. 91c:81081  
 Dubuc, Serge An approximation of the gamma function. 91e:65031  
 Glasser, M. L. (with Cosgrove, C.) Erratum: "Mallows' integral and some generalizations" [J. Math. Anal. Appl. 139 (1989), no. 2, 533–536; MR 90h:33002]. (Not in MR)  
 Gordon, Louis Bounds for the distribution of the generalized variance. 91a:62127  
 Krämer, Walter Stephan Berechnung der Gammafunktion  $\Gamma(x)$  für reelle Punkt- und Intervallargumente. [Computation of the gamma function  $\Gamma(x)$  for real point and interval arguments] 91h:65034  
 Lucht, Lutz G. Mittelwertungleichungen für Lösungen gewisser Differenzengleichungen. (English summary) [Mean value inequalities for solutions of certain difference equations] 91h:39004  
 Miller, Allen R. Reduction formulae for Kampé de Fériet functions  $F_{p,q}^{p+1}$ . 91h:33016  
 Schofield, J. P. *see* Dowker, J. S., 91c:81081

## 33B20 Incomplete beta and gamma functions (error functions, probability integral, Fresnel integrals)

- Temme, Nico M. On the computation of special functions by using asymptotic expansions. 91h:33001

## 33B99 None of the above, but in this section

- Kincanon, Eric An orthogonal set composed from the functions  $e^{nx}$ ,  $n \geq 0$ ,  $x \leq 0$ . (Not in MR)  
 Korobkova, I. K. *see* Zmorovich, V. A., 91g:33003  
 Raina, R. K. A series relation by means of certain fractional calculus operators. 91h:33002  
 Zmorovich, V. A. (with Korobkova, I. K.) On a class of gammamorphic functions. 91g:33003  
 Items with secondary classifications in 33B99  
 Abouzahra, M. *see* Lewis, L., 91h:39005  
 Carlson, B. C. Landen transformations of integrals. 91m:33026  
 Ikromov, I. A. Invariant estimates for two-dimensional trigonometric integrals. 91f:26010  
 Lewis, L. (with Abouzahra, M.) Supernumerary polylogarithmic ladders and related functional equations. 91h:39005  
 Schwerdtfeger, P. (with Silberbach, H.) Erratum: "Multicenter integrals over long-range operators using Cartesian Gaussian functions" [Phys. Rev. A (3) 37 (1988), no. 8, 2834–2842; MR 89b:81258]. 91d:81038  
 Silberbach, H. *see* Schwerdtfeger, P., 91d:81038

## 33Cxx Hypergeometric functions

33C05 Classical hypergeometric functions,  ${}_2F_1$ 

- Cooper, S. Clement (with Jones, William B.; Magnus, Arne) General  $T$ -fraction expansions for ratios of hypergeometric functions [Appl. Numer. Math. 4 (1988), no. 2–4, 241–251; MR 89g:33005]. (See 91m:41002)  
 Goyal, S. P. (with Gupta, Rajni) Certain double generating functions for the generalized hypergeometric functions. 91h:33003  
 Gupta, Rajni *see* Goyal, S. P., 91h:33003  
 Jones, William B. *see* Cooper, S. Clement; et al., (91m:41002)  
 Magnus, Arne *see* Cooper, S. Clement; et al., (91m:41002)  
 Srivastava, Hari M. A class of infinite series involving binomial and factorial coefficients. 91h:33001  
 Will, Herbert S. (with Zeilberger, Doron) Towards computerized proofs of identities. 91h:33003  
 Zeilberger, Doron *see* Will, Herbert S., 91h:33003  
 Items with secondary classifications in 33C05  
 Aly, H. H. (with Barut, Asim O.) Methods of solution of the Schrödinger equations for a class of anharmonic and singular potentials. 91h:81019  
 Barut, Asim O. *see* Aly, H. H., 91h:81019  
 Borwein, Jonathan M. (with Borwein, Peter) A cubic counterpart of Jacobi's identity and the AGM. 91e:33012  
 Borwein, Peter *see* Borwein, Jonathan M., 91e:33012  
 de Branges, Louis ★ Underlying concepts in the proof of the Bieberbach conjecture. 91h:30052  
 (Dedekind, Richard) *see* Riemann, Georg Friedrich Bernhard, 91j:01070a and 91j:01070b  
 Dhillon, Saroop Singh *see* Shrivastava, P. N., 91h:33013  
 Heckman, G. J. Hecke algebras and hypergeometric functions. 91d:33033  
 Ismail, Mourad E. H. (with Merkes, Edward; Styer, David) A generalization of starlike functions. 91h:30038  
 Merkes, Edward *see* Ismail, Mourad E. H.; et al., 91h:30038  
 Moorthathu, T. S. K. On certain identities in special functions. 91h:33004  
 (Narasimhan, Raghavan) *see* Riemann, Georg Friedrich Bernhard, 91j:01070a and 91j:01070b  
 Riemann, Georg Friedrich Bernhard ★ Gesammelte mathematische Werke, wissenschaftlicher Nachlass und Nachträge. (German) [Collected mathematical works, scientific Nachlass and addenda] 91j:01070a  
 — ★ Gesammelte mathematische Werke, wissenschaftlicher Nachlass und Nachträge. (German) [Collected mathematical works, scientific Nachlass and addenda] 91j:01070b  
 Saxena, Ram Kishore Applications of special functions to probability distributions. 91f:60032  
 (Schiffer, Menahem M.) *see* de Branges, Louis, 91h:30052

- Shrivastava, P. N. (with Dhillon, Saroop Singh) Lie theory and hypergeometric function  ${}_2F_1[a+n, b; c+n; z]$ . 91h:33013  
 Singh, Surya Narain On unification and extension of Bernoulli, Euler and Eulerian polynomials. 91e:11023  
 Styer, David *see* Ismail, Mourad E. H.; et al., 91h:30038  
 (Weber, Heinrich) *see* Riemann, Georg Friedrich Bernhard, 91j:01070a and 91j:01070b  
 Will, Herbert S. (with Zeilberger, Doron) Rational functions certify combinatorial identities. 91a:05006  
 Wolfart, J. Values of Gauss' continued fractions. 91j:11060  
 Zeilberger, Doron A fast algorithm for proving terminating hypergeometric identities. 91d:33006  
 — *see also* Will, Herbert S., 91a:05006

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## Biography:

- Riemann, Georg Friedrich Bernhard *see* Riemann, Georg Friedrich Bernhard, 91j:01070a and 91j:01070b

## Collected Works:

- Riemann, Georg Friedrich Bernhard *see* Riemann, Georg Friedrich Bernhard, 91j:01070a and 91j:01070b

33C10 Bessel and Airy functions, cylinder functions,  ${}_0F_1$ 

- Atakishiev, N. M. (with Suslov, S. K.) About one class of special functions. (Spanish summary) 91e:33001  
 Balakrishnan, Narayanaswamy *see* Parthasarathy, P. R., (Not in MR) and (Not in MR)  
 Bird, J. F. *see* Stoyanov, B. J.; et al., 91m:33003  
 Boyd, W. G. C. Stieltjes transforms and the Stokes phenomenon. 91m:33001  
 Dattoli, G. (with Giannessi, L.; Ricchetta, M.; Torre, Amalia) Miscellaneous results on infinite series of Bessel functions. (Italian and Russian summaries) 91h:33004  
 — (with Giannessi, L.; Mezi, L.; Torre, Amalia) Theory of generalized Bessel functions. (Italian and Russian summaries) 91e:33002  
 Dunster, T. M. Bessel functions of purely imaginary order, with an application to second-order linear differential equations having a large parameter. 91f:33002  
 Exton, Harold Series of Bessel functions. 91c:33004  
 Farrell, R. A. *see* Stoyanov, B. J.; et al., 91m:33003  
 Flitouhi, A. Heat "polynomials" for a singular differential operator on  $(0, \infty)$ . 91h:33002  
 Georgiou, G. Ch. *see* Paraskevopoulos, P. N.; et al., 91c:33005  
 Giannessi, L. *see* Dattoli, G.; et al., 91h:33004 and 91h:33002  
 Gori Nicolò-Amati, Laura (with Laforgia, Andrea; Muldoon, Martin E.) Higher monotonicity properties and inequalities for zeros of Bessel functions. 91j:33002  
 Ifantis, E. K. (with Sifarakis, P. D.) A result on the imaginary zeros of  $J'_\nu(z)$ . 91j:33003  
 — (with Sifarakis, P. D.) Differential inequalities for the positive zeros of Bessel functions. 91d:33002  
 — (with Sifarakis, P. D.) Inequalities involving Bessel and modified Bessel functions. 91e:33003  
 Kerimov, M. K. Calculating the Rayleigh function. (Russian) 91m:33002  
 Laforgia, Andrea Bounds for the zeros of some special functions. 91h:33003  
 — *see also* Gori Nicolò-Amati, Laura; et al., 91j:33002  
 Mezi, L. *see* Dattoli, G.; et al., 91h:33002  
 Muldoon, Martin E. *see* Gori Nicolò-Amati, Laura; et al., 91j:33002  
 Paraskevopoulos, P. N. (with Sklavounos, P. G.; Georgiou, G. Ch.) The operational matrix of integration for Bessel functions. 91c:33005  
 Parthasarathy, P. R. (with Balakrishnan, Narayanaswamy) A continued fraction approximation of the modified Bessel function  $I_1(t)$ . (Not in MR)  
 — (with Balakrishnan, Narayanaswamy) A continued fraction approximation of the modified Bessel function  $I_1(t)$ . (Not in MR)  
 Radzhabov, E. L. A new formulation of a theorem of Hankel. (Russian. Tajiki summary) (Not in MR)  
 Ricchetta, M. *see* Dattoli, G.; et al., 91h:33004  
 Sifarakis, P. D. *see* Ifantis, E. K., 91d:33002; 91e:33003 and 91j:33003  
 Sklavounos, P. G. *see* Paraskevopoulos, P. N.; et al., 91c:33005  
 Song, Guo Dong<sup>1</sup> *see* Zhong, Chang Yong, 91a:33004  
 Stoyanov, B. J. (with Farrell, R. A.; Bird, J. F.) Asymptotic expansions of integrals of two Bessel functions. 91m:33003  
 Suslov, S. K. *see* Atakishiev, N. M., 91e:33001  
 de Tolt, Cornelis F. The numerical computation of Bessel functions of the first and second kind for integer orders and complex arguments. 91e:33004  
 Torre, Amalia *see* Dattoli, G.; et al., 91h:33004 and 91h:33002  
 Wimp, Jet Some properties of convolution sequences and asymptotics for the Taylor coefficients for products of Bessel functions. 91m:33004  
 Zhong, Chang Yong (with Song, Guo Dong<sup>1</sup>) On primality of the Bessel functions. (Chinese summary) 91a:33004  
 Items with secondary classifications in 33C10  
 Ashbaugh, Mark S. (with Benguria, Rafael D.) Proof of the Payne-Pólya-Weinberger conjecture. 91m:35173  
 Audich, Sunil On certain triple integral relations. 91h:33013  
 Benguria, Rafael D. *see* Ashbaugh, Mark S., 91m:35173  
 Berry, M. V. (with Howls, C. J.) Fake Airy functions and the asymptotics of reflectionlessness. 91h:78012  
 Boyd, W. G. C. Asymptotic expansions for the coefficient functions associated with linear second-order differential equations: the simple pole case. 91c:34073  
 Cargo, G. T. Perfect approximant points of  $\tanh z$ . 91h:30013  
 Cessenat, Michel Sur quelques opérateurs liés à l'équation de Helmholtz en coordonnées polaires, transformation H.K.L. (Hankel-Kantorovich-Lebedev). (English summary) [On some operators for the Helmholtz equation in polar coordinates; the Hankel-Kantorovich-Lebedev transform] 91e:35072  
 Čížek, Jiří Karel *see* Weniger, Ernst Joachim, 91j:65040  
 Das, A. G. (with Lahiri, B. K.) Bessel type functions involving Dirichlet series. 91e:34005



- Dunster, T. M. Uniform asymptotic solutions of second-order linear differential equations having a double pole with complex exponent and a coalescing turning point. 91m:34069
- Dvornak, Steven L. (with Kuester, Edward F.) Numerical computation of the incomplete Lipschitz-Hankel integral  $J_0(a, z)$ . 91c:65032
- Howls, C. J. see Berry, M. V., 91b:78012
- Kuester, Edward F. see Dvornak, Steven L., 91c:65032
- Lahiri, B. K. see Das, A. G., 91c:34005
- Maccone, C. Bessel functions with a nonconstant order as eigenfunctions of the time-rescaled Gaussian processes. 91g:65320
- Macháček, Martin An orthonormal basis of solenoidal vector functions vanishing on a cylinder. 91f:35218
- Méndez Pérez, José Manuel Romulo (with Negrín Aguirre, Juan Ramón) Fourier-Bessel series expansions of generalized functions and finite Hankel transforms of distributions. 91d:44001
- Miller, Allen R. Incomplete Lipschitz-Hankel integrals of MacDonald functions. 91c:33025
- Miller, Thomas \* Verallgemeinerte Airyfunktionen. (German) [Generalized Airy functions] 91c:58013
- Mohamed, Shahwar F. Infinite series of  $E$ -functions. 91c:33021
- Monzon, J. Cesar Two-dimensional Green's functions for a rotationally invariant anisotropic medium. 91e:78022
- Negrín, E. R. The  $K$ -transformation index. 91f:44002
- Negrín Aguirre, Juan Ramón see Méndez Pérez, José Manuel Romulo, 91d:44001
- Ohkouchi, Shigemi An extension of Weber's equation. 91k:34008
- Piquette, Jean C. Applications of a technique for evaluating indefinite integrals containing products of the special functions of physics. 91c:33029
- Pursey, D. L. Properties of Leach-Fleissas-Gorringe polynomials. 91g:33011
- Smith, Donald Ray A Riccati approach to the Airy equation. 91f:34007
- Soni, K. (with Soni, R. P.) A system of polynomials associated with the Chester, Friedman, and Ursell technique. 91h:30063
- Soni, R. P. see Soni, K., 91h:30063
- Tanimura, N. (with Tanimura, O.) New Bessel-type function associated with  $SU(3)$  representation. 91m:81176
- Tanimura, O. see Tanimura, N., 91m:81176
- Temme, Nico M. On the computation of special functions by using asymptotic expansions. 91k:33001
- Uniform asymptotic expansions of a class of integrals in terms of modified Bessel functions, with application to confluent hypergeometric functions. 91b:41026
- Asymptotic estimates for Laguerre polynomials. 91f:33004
- Tezer, Merve On the numerical evaluation of an oscillating infinite series. 91b:65025
- Vũ Kim Tuấn Some integral transformations with a Macdonald function in the kernel. (Russian) 91d:44003
- Some integral transformations with the Macdonald function  $K_\nu(z)$  in the kernels. 91k:44008
- Weniger, Ernst Joachim (with Čížek, Jiří Karel) Rational approximations for the modified Bessel function of the second kind. 91j:65040

### 33C15 Confluent hypergeometric functions, Whittaker functions, ${}_1F_1$

- Georgiev, G. N. see Ivanov, K. P., 91b:33005
- Ivanov, K. P. (with Georgiev, G. N.) Asymptotic study of complex Kummer function. 91b:33005
- Karule, E. Integrals of two confluent hypergeometric functions. 91d:33003
- Moothathu, T. S. K. On certain identities in special functions. 91k:33004
- Pittaluga, Giovanna Integrals of confluent hypergeometric functions. 91m:33005
- Rusev, Pet' K. Müntz type theorems for systems of Tricomi's confluent hypergeometric functions. 91d:33004

Items with secondary classifications in 33C15

- Erahov, A. A. see Galt'sov, D. V., 91a:83009
- Galt'sov, D. V. (with Ershov, A. A.) An exact solution of Teukolsky and Klein-Gordon radial equations in a class of vacuum metrics of type D. 91a:83009
- Martinet, Jean see Ramis, Jean-Pierre, 91d:12014
- Ramis, Jean-Pierre (with Martinet, Jean) Théorie de Galois différentielle et resommation. [Differential Galois theory and resummation] 91d:12014
- Temme, Nico M. Uniform asymptotic expansions of a class of integrals in terms of modified Bessel functions, with application to confluent hypergeometric functions. 91b:41026

### 33C20 Generalized hypergeometric series, ${}_pF_q$

- Agrawal, B. D. (with Dave, G. N.) Some bilateral generating relations for the generalized multivariate polynomial system. 91f:33002
- Chowdhury, M. R. A differential recurrence relation for the generalized Rice polynomial. 91b:33007
- Dave, G. N. see Agrawal, B. D., 91f:33002
- Ekhad, Shalosh B. (with Zeilberger, Doron) A 21st century proof of Dougall's hypergeometric sum identity. 91g:33004
- Exton, Harold Series of squares of Legendre of the second kind. 91h:33001
- Gelfand, I. M. (with Graev, M. I.; Retakh, V. S.)  $T$ -series and general hypergeometric functions on the manifold of  $k \times n$  matrices. (Russian. English summary) 91j:33004
- Graev, M. I. see Gelfand, I. M.; et al., 91j:33004
- Marichev, O. I. see Saigo, Megumi; et al., 91c:33006
- Mishra, Sadhana Integrals and Fourier-Bessel expansions for products of generalized hypergeometric functions. 91g:33005
- Nguyen Thanh Hai see Saigo, Megumi; et al., 91c:33006
- Pathan-Yasmeen, M. A. see Srivastava, Hari M.; et al., 91c:33007
- Raina, R. K. An application of fractional calculus. 91j:33005
- Ram, Jeta see Saxena, Ram Kishore, 91k:33005
- Ramis, Jean-Pierre Confluence et résurgence. [Confluence and resurgence] 91f:33003
- Retakh, V. S. see Gelfand, I. M.; et al., 91j:33004

- Saigo, Megumi (with Marichev, O. I.; Nguyen Thanh Hai) Asymptotic representations of Gaussian series  ${}_2F_1$ , Clausenian series  ${}_3F_2$ , and Appell series  $F_2$  and  $F_3$  near boundaries of their convergence regions. 91c:33006
- (with Srivastava, Hari M.) The behavior of the zero-balanced hypergeometric series  ${}_pF_{p-1}$  near the boundary of its convergence region. 91d:33005
- Saxena, Ram Kishore (with Ram, Jeta) Multidimensional fractional integration operators associated with generalized hypergeometric functions. 91k:33005
- Shah, Manilal Differential recurrence relations for generalized Rice polynomials. 91b:33006
- Srivastava, Hari M. (with Pathan-Yasmeen, M. A.; Yasmeen) Some reduction formulas for multiple hypergeometric series. 91c:33007
- see also Saigo, Megumi, 91d:33005
- Yasmeen, see Srivastava, Hari M.; et al., 91c:33007
- Zeilberger, Doron A fast algorithm for proving terminating hypergeometric identities. 91d:33006
- see also Ekhad, Shalosh B., 91g:33004
- Zeng, Jiang Sur une formule de Ramanujan-Bailey. (English summary) [On a Ramanujan-Bailey formula] 91m:33006

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- Atakishiev, N. M. (with Suslov, S. K.) About one class of special functions. (Spanish summary) 91c:33001
- Biedenharn, L. C. (with Louck, J. D.) A new class of symmetric polynomials defined in terms of tableaux. 91c:05189
- Brown, James Ward A property of Steffensen sequences. (Serbo-Croatian summary) 91d:05009
- Heckman, G. J. Hecke algebras and hypergeometric functions. 91d:33033
- Loock, J. D. see Biedenharn, L. C., 91c:05189
- Manocha, H. L. Lie theory of certain special functions arising as solutions of differential equations. 91f:33008
- Mitschke, Claude Groupe de Galois différentiel des équations hypergéométriques confluentes généralisées. (English summary) [Differential Galois group of generalized confluent hypergeometric equations] 91a:12010
- Rajeswari, V. (with Srinivasa Rao, K.) Corrigendum: "Four sets of  ${}_3F_2(1)$ s, Hahn polynomials and recurrence relations for the 3- $j$  coefficients" [J. Phys. A 22 (1989), no. 19, 4113–4123; MR 90i:22041]. 91b:22031
- Srinivasa Rao, K. see Rajeswari, V., 91b:22031
- Suslov, S. K. see Atakishiev, N. M., 91c:33001
- Wilf, Herbert S. (with Zeilberger, Doron) Towards computerized proofs of identities. 91a:33003
- Zeilberger, Doron see Wilf, Herbert S., 91a:33003
- Zeng, Jiang Calcul saalschützien des partitions et des dérangements colorés. (English summary) [Saalschütz calculation of colored partitions and derangements] 91c:05016

### 33C45 Orthogonal polynomials and functions (Chebyshev, Legendre, Gegenbauer, Jacobi, Laguerre, Hermite, Hahn, etc.)

- Abilov, V. A. An extremal property of classical orthogonal polynomials. (Russian) 91m:33007
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## 34-XX Ordinary differential equations

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- Amann, Herbert ★ Ordinary differential equations. 91e:34001  
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- (Bakhvalov, N. S.) see Hairer, Ernst; et al., 91e:65002  
 Brock, William A. (with Malliaris, A. G.) ★ Differential equations, stability and chaos in dynamic economics. 91a:90047  
 (Filippov, S. S.) see Hairer, Ernst; et al., 91e:65002  
 Hairer, Ernst (with Norsett, Syvert P.; Wanner, Gerhard) ★ Решение обыкновенных дифференциальных уравнений. (Russian) [Solving ordinary differential equations] 91e:65002  
 (Kufchitskaya, I. A.) see Hairer, Ernst; et al., 91e:65002  
 Mackie, A. G. ★ Boundary value problems. 91i:00002  
 Malliaris, A. G. see Brock, William A., 91a:90047  
 Norsett, Syvert P. see Hairer, Ernst; et al., 91e:65002  
 Stephan, Hans ★ Differential equations. 91a:58001  
 Wanner, Gerhard see Hairer, Ernst; et al., 91e:65002

## 34-02 Research exposition (monographs, survey articles)

- Eastham, M. S. P. ★ The asymptotic solution of linear differential systems. 91d:34001  
 Verhulst, Ferdinand ★ Nonlinear differential equations and dynamical systems. 91b:34002

## Items with secondary classifications in 34-02

- Bainov, D. D. *see* Lakshmikantham, V.; et al., 91m:34013  
 Lakshmikantham, V. (with Bainov, D. D.; Simeonov, P. S.) ★ Theory of impulsive differential equations. 91m:34013  
 — *see also* Martynyuk, A. A.; et al., 91e:34055  
 Leela, S. *see* Martynyuk, A. A.; et al., 91e:34055  
 Liseikin, V. D. *see* Petrenko, V. E., 91h:34089  
 Martynyuk, A. A. (with Lakshmikantham, V.; Leela, S.) ★ Устойчивость движения: метод интегральных неравенств. (Russian) [Stability of motion: the method of integral inequalities] 91e:34055  
 (Mitropolskii, Yu. A.) *see* Martynyuk, A. A.; et al., 91e:34055  
 Paraev, Yu. I. ★ Уравнения Ляпунова и Риккати. (Russian) [Lyapunov and Riccati equations] 91d:93001  
 Petrenko, V. E. (with Liseikin, V. D.) ★ Обзор некоторых теоретических результатов для сингулярно-возмущенных задач. (Russian) [A survey of some theoretical results for singularly perturbed problems] 91h:34089  
 Simeonov, P. S. *see* Lakshmikantham, V.; et al., 91m:34013  
 Stépán, G. ★ Retarded dynamical systems: stability and characteristic functions. 91h:34123

## 34-03 Historical (must also be assigned at least one classification number from Section 01)

## Items with secondary classifications in 34-03

- Aleksandrova, N. V. (with Turpanova, V. M.) The concept of linear independence. (Russian. English summary) 91i:01038  
 (Bogolyubov, N. N.) *see* Mitropolskii, Yu. A., (Not in MR)  
 Cauchy, Augustin-Louis ★ Equations différentielles ordinaires. (French) [Ordinary differential equations] 91e:01033  
 (Dieudonné, Jean) *see* Cauchy, Augustin-Louis, 91e:01033  
 (Gilain, Christian) *see* Cauchy, Augustin-Louis, 91e:01033  
 (Krylov, N. M.) *see* Mitropolskii, Yu. A., (Not in MR)  
 Mitropolskii, Yu. A. The ideas of Krylov and Bogolyubov in the theory of differential equations and mathematical physics, and their development. (Not in MR)  
 Turpanova, V. M. *see* Aleksandrova, N. V., 91i:01038

## 34-04 Explicit machine computation and programs (not the theory of computation or programming)

- Bachmann, K.-H. Automatische Lösung gewöhnlicher Differentialgleichungen mit der Lie-Reihen-Methode. [Automatic solution of ordinary differential equations using the Lie series method] *see* 91h:00022  
 Chow, Shui-Nee (with Drachman, Byron; Wang, Duo) Computation of normal forms. 91c:34001  
 Crichowski, Günter Behandlung von Differentialgleichungen mit Lie-Theorie und Computer. [Treatment of differential equations with Lie theory and computer] 91b:34003  
 Drachman, Byron *see* Chow, Shui-Nee; et al., 91c:34001  
 Fateman, Richard J. (with Grossman, Robert) Computer algebra and operators. *see* 91f:00012  
 Grossman, Robert *see* Fateman, Richard J., (91f:00012)  
 Wang, Duo *see* Chow, Shui-Nee; et al., 91c:34001

## Items with secondary classifications in 34-04

- Arushanyan, O. B. (with Zaitkin, S. F.) ★ Численное решение обыкновенных дифференциальных уравнений на Фортране. (Russian) [Numerical solution of ordinary differential equations in Fortran] 91m:65187  
 Göhler, M. (with Plum, Michael; Schröder, Johann) A programmed algorithm for existence proofs for two-point boundary value problems. (German summary) 91g:65183  
 Grigor'ev, D. Ya. Complexity of quantifier elimination in the theory of ordinary differential equations. 91m:12009  
 Plum, Michael *see* Göhler, M.; et al., 91g:65183  
 Schröder, Johann *see* Göhler, M.; et al., 91g:65183  
 Zaitkin, S. F. *see* Arushanyan, O. B., 91m:65187

## 34-06 Proceedings, conferences, collections, etc.

- (Azbelev, N. V.) *see* Functional-differential equations, 91b:34001  
 (Otrokov, N. F.) *see* Differential and integral equations, 91b:34004

## Items listed otherwise than by author

- Differential and integral equations ★ Дифференциальные и интегральные уравнения. (Russian) [Differential and integral equations] 91b:34004  
 Functional-differential equations ★ Функционально-дифференциальные уравнения. (Russian) [Functional-differential equations] 91b:34001

## Items with secondary classifications in 34-06

- (Azbelev, N. V.) *see* Functional-differential equations, 91e:34069 and 91e:34070  
 (Butler, Geoffrey J.) *see* Conference: Differential Equations and Mathematical Biology, 91i:00035  
 (Elaydi, Saber) *see* Differential equations, 91m:00031  
 (Erbe, Lynn H.) *see* Conference: Differential Equations and Mathematical Biology, 91i:00035  
 (François, Jean-Pierre) *see* Bifurcations of planar vector fields, 91j:58004  
 (Freedman, H. I.) *see* Conference: Differential Equations and Mathematical Biology, 91i:00035  
 (Hatvani, L.) *see* Qualitative theory of differential equations, 91b:00051  
 (Roussarie, R.) *see* Bifurcations of planar vector fields, 91j:58004  
 (Szőkefalvi-Nagy, Béla) *see* Qualitative theory of differential equations, 91b:00051  
 (Tsyganova, N. Ya.) *see* Differential equations and applied problems, 91k:00019

(Volkodavov, V. F.) *see* Classical and nonclassical boundary value problems for partial differential equations, special functions, integral equations and their applications, (Not in MR)

(Voskresenskii, E. V.) *see* Qualitative and asymptotic methods for the integration of perturbed differential equations, 91b:00036

## Items listed otherwise than by author

## All-Union Conference:

Classical and Nonclassical Boundary Value Problems for Partial Differential Equations, Special Functions, Integral Equations and their Applications ★ Классические и неклассические краевые задачи для дифференциальных уравнений с частными производными, специальные функции, интегральные уравнения и их приложения. (Russian) [Classical and nonclassical boundary value problems for partial differential equations, special functions, integral equations and their applications] (Not in MR)

Bifurcations of planar vector fields ★ Bifurcations of planar vector fields. 91j:58004

Classical and nonclassical boundary value problems for partial differential equations, special functions, integral equations and their applications ★ Классические и неклассические краевые задачи для дифференциальных уравнений с частными производными, специальные функции, интегральные уравнения и их приложения. (Russian) [Classical and nonclassical boundary value problems for partial differential equations, special functions, integral equations and their applications] (Not in MR)

Colloquia Mathematica Societatis János Bolyai ★ Qualitative theory of differential equations. 91b:00051

## Colloquium:

Qualitative Theory of Differential Equations ★ Qualitative theory of differential equations. 91b:00051

Colorado Springs, CO ★ Differential equations. 91m:00031

## Conference:

Differential Equations and Mathematical Biology ★ Geoffrey J. Butler Memorial Conference in Differential Equations and Mathematical Biology. 91i:00035

Differential Equations: Theory and Applications in Stability and Control ★ Differential equations. 91m:00031

Differential equations ★ Differential equations. 91m:00031

Differential equations and applied problems ★ Дифференциальные уравнения и прикладные задачи. (Russian) [Differential equations and applied problems] 91k:00019

Edmonton, AB ★ Geoffrey J. Butler Memorial Conference in Differential Equations and Mathematical Biology. 91k:00035

Functional-differential equations ★ Функционально-дифференциальные уравнения. (Russian) [Functional-differential equations] 91e:34069

— ★ Функционально-дифференциальные уравнения. (Russian) [Functional-differential equations] 91e:34070

Investigations on formula manipulation systems for differential equations ★ Bibun hōteishiki no sūshikishōri shisutemu no kenkyū. (Japanese) [Investigations on formula manipulation systems for differential equations] 91k:00014

Kuzyshchev ★ Классические и неклассические краевые задачи для дифференциальных уравнений с частными производными, специальные функции, интегральные уравнения и их приложения. (Russian) [Classical and nonclassical boundary value problems for partial differential equations, special functions, integral equations and their applications] (Not in MR)

Lecture Notes in Mathematics ★ Bifurcations of planar vector fields. 91j:58004

Luminy ★ Bifurcations of planar vector fields. 91j:58004

## Meeting:

Bifurcations of Planar Vector Fields ★ Bifurcations of planar vector fields. 91j:58004

Qualitative and asymptotic methods for the integration of perturbed differential equations ★ Качественные и асимптотические методы интегрирования возмущенных дифференциальных уравнений. (Russian) [Qualitative and asymptotic methods for the integration of perturbed differential equations] 91b:00036

Qualitative theory of differential equations ★ Qualitative theory of differential equations. 91b:00051

## Symposium:

Investigations on Formula Manipulation Systems for Differential Equations ★ Bibun hōteishiki no sūshikishōri shisutemu no kenkyū. (Japanese) [Algebraic on formula manipulation systems for differential equations] 91k:00014

Szeged ★ Qualitative theory of differential equations. 91b:00051

## 34Axx General theory

## Items with secondary classifications in 34Axx

Perko, Lawrence ★ Differential equations and dynamical systems. 91m:34001

## 34A05 Explicit solutions and reductions

Airault, Hélène Reducible cases for  $v'' = h(\Gamma)\partial\Gamma/\partial v$ . 91j:34001

Akhundov, A. A. A remark on the Cauchy formula for linear degenerate equations with a regular matrix pencil. (Russian. English and Azerbaijani summaries) (Not in MR)  
 Bereslavskii, E. N. Integration in closed form of a class of Fuchsian equations and its applications. (Russian) 91a:34001

Bluman, George W. A reduction algorithm for an ordinary differential equation admitting a solvable Lie group. 91m:34002

— Invariant solutions for ordinary differential equations. 91m:34003

Ditto, W. L. (with Pickett, T. J.) Exact solutions of nonlinear differential equations using continued fractions. 91k:34001

Dryuma, V. S. Projective duality in the theory of second-order differential equations. (Russian) 91j:34002

Iwano, Masahiro The determination of a general solution for Gauss differential equation represented by rational functions. 91h:34002

Ji, Zhen Yi (with Ye, Kai Yuan) Exact analytic method for solving variable coefficient differential equation. 91a:34002



Jódar, Lucas (with Navarro, E.) On the generalized Riccati matrix differential equation. Exact, approximate solutions and error estimate. (Russian and Czech summaries) 91h:34003

— (with Morera, J. L.; Navarro, E.) Closed form solutions of two-point boundary value problems for second order matrix differential equations. 91d:34002

Kulikovskii, V. A. see Vartanyan, A. A. (Not in MR)

Lakshmanan, M. see Parthasarathy, S. 91a:34003

Morera, J. L. see Jódar, Lucas; et al. 91d:34002

Navarro, E. see Jódar, Lucas; et al. 91d:34002 and 91h:34003

Parthasarathy, S. (with Lakshmanan, M.) On the exact solutions of the Duffing oscillator. 91a:34003

Pickett, T. J. see Ditto, W. L. 91h:34001

Riad, Rafat Block-pulse functions series solution of time-varying linear systems of higher order. 91m:34004

Senitskii, A. Yu. see Senitskii, Yu. É. 91f:34001

Senitskii, Yu. É. (with Senitskii, A. Yu.) Solution of a differential equation with variable coefficients that has an application to the dynamic theory of elasticity. (Russian) 91f:34001

Vartanyan, A. A. (with Kulikovskii, V. A.) A case of the integrability of the Riccati equation. (Russian) (Not in MR)

Wang, Xiu Lan Solutions to two classes of linear equations of order  $n$  with variable coefficients. (Chinese. English summary) (Not in MR)

Ye, Kai Yuan see Ji, Zhen Yi. 91a:34002

Items with secondary classifications in 34A05

Al-Sagabi, Bader (with Kalla, Shyam L.) Solution of second and third order linear differential equations by fractional calculus. 91j:34015

Balachandran, Krishnan see Thandapani, E.; et al. 91a:34014

Balasubramanian, G. see Thandapani, E.; et al. 91a:34014

Basu, Ashis (with Ray, Dipankar) Solutions of an equation that lead to solutions of a modified Emden equation and a coupled Korteweg-de Vries equation. 91c:35129

Belmechdi, S. see Rouvenoux, A.; et al. 91c:33016

Bereslavskii, É. N. Some equations of the Fuchs class encountered in problems in mathematical physics. (Russian. English summary) 91h:34047

Christina, Jan On formal theory of differential equations. II. (Russian and Czech summaries) 91c:58009a

— Corrections to the paper: "On formal theory of differential equations. II". 91c:58009b

Cichowski, Günter Behandlung von Differentialgleichungen mit Lie-Theorie und Computer. [Treatment of differential equations with Lie theory and computer] 91h:34003

Dini, J. see Rouvenoux, A.; et al. 91c:33016

Dixon, J. M. (with Tuszyński, J. A.) Solutions of a generalized Emden equation and their physical significance. 91g:82048

Jódar, Lucas (with Navarro, E.) Solving singular regular systems  $A_2 X'' + A_1 X' + A_0 X = F(t)$  without increasing the dimension of the problem. 91m:34011

— Explicit solutions of Riccati equations appearing in differential games. 91m:90218

— Solving a class of generalized Lyapunov operator differential equations without the exponential operator function. 91j:34095

Kalla, Shyam L. see Al-Sagabi, Bader. 91j:34015

Leach, P. G. L. see Mahomed, F. M. 91d:58221

Magyar, Eugen Funktionen beschränkter Homogenität. [Functions of restricted homogeneity] 91h:39003

Mahomed, F. M. (with Leach, P. G. L.) The Lie algebra  $sl(3, \mathbb{R})$  and linearization. 91d:58221

Maroni, P. see Rouvenoux, A.; et al. 91c:33016

Navarro, E. see Jódar, Lucas. 91m:34011

Özpelik, Süleyman (with Şimşek, Mehmet) Exact solutions of the radial Schrödinger equation for inverse-power potentials. 91k:81030

Qin, Chao Bin (with Qin, Yuan Xun) Errata: "On a system of second order differential equations with periodic impulse coefficients" [Acta Math. Appl. Sinica (English Ser.) 5 (1989), no. 4, 298–309; MR 90j:34056]. (Not in MR)

Qin, Yuan Xun see Qin, Chao Bin. (Not in MR)

Ray, Dipankar see Basu, Ashis. 91c:35129

Rouvenoux, A. (with Belmechdi, S.; Dini, J.; Maroni, P.) Fourth-order differential equation for the co-modified of semi-classical orthogonal polynomials. 91c:33016

Rodnowski, T. Surface waves in an isotropic elastic nonhomogeneous semi-space. (Russian and Polish summaries) 91d:73022

Santos, Gildemar C. Application of finite expansion in elliptic functions to solve differential equations. 91k:34009

Şimşek, Mehmet see Özpelik, Süleyman. 91k:81030

Singer, Michael F. Formal solutions of differential equations. 91m:12011

Thandapani, E. (with Balachandran, Krishnan; Balasubramanian, G.) Series solutions of a general nonlinear equation. 91a:34014

Tuszyński, J. A. see Dixon, J. M. 91g:82048

### 34A08 Equations not solved with respect to the highest-order derivative, singular solutions (1985)

Baker, John A. Differential equations for test functions. (Not in MR)

### 34A09 Implicit equations

Barlund, Anders (with Kågström, Bo) Analytical and numerical solutions to higher index linear variable coefficient DAE systems. 91j:34003

Gérard, Raymond Étude locale des équations différentielles de la forme  $xy' = f(x, y)$  au voisinage de  $x = 0$ . [Local study of differential equations of the form  $xy' = f(x, y)$  in the neighborhood of  $x = 0$ ] 91c:34002

Kågström, Bo see Barlund, Anders. 91j:34003

Prosenyuk, L. G. Representation of regular solutions of a real differential equation that is not solved with respect to the derivative. 91g:34001

Reich, Sebastian On a geometric characterization of differential-algebraic equations. 91m:34005

Skripnik, V. P. Convergence in  $L^2$  and pointwise convergence of solutions of singularly perturbed equations. (Russian) 91g:34002

— On the convergence in  $L^2$  of solutions of equations with a degenerate parameter. (Russian) 91g:34003

Srinivas, P. D. N. see Venkatesulu, M. 91a:34004

Venkatesulu, M. (with Srinivas, P. D. N.) Solutions of nonstandard initial value problems for a first order ordinary differential equation. 91a:34004

Items with secondary classifications in 34A09

Afyan, S. K. A system of ordinary differential equations of noncanonical form. II. (Russian. English and Armenian summaries) 91k:34002

Bajić, Vladimir B. Nonlinear functions and stability of motions of implicit differential systems. 91k:93058

Bluman, George W. Invariant solutions for ordinary differential equations. 91m:34003

Campbell, Stephen L. (with Clark, Kenneth D.) Singular control problem structure and the convergence of backward differentiation formulas. 91a:93032

Christodoulou, M. A. (with Mertzios, B. G.) Singular systems: a survey of the recent research work. 91f:93059

Chua, Leon O. (with Oka, Hiroe) Normal forms for constrained nonlinear differential equations. I. Theory. 91a:58168

Clark, Kenneth D. see Campbell, Stephen L. 91a:93032

Gear, C. W. Differential algebraic equations, indices, and integral algebraic equations. 91m:65192

Griepentrog, Eberhard Transformation of differential-algebraic equations. 91g:34018

Hanke, Michael On the regularization of index 2 differential-algebraic equations. 91j:34028

Higuera Sanz, Immaculada Asymptotic expansion of the global error of BDF formulas applied to systems of differential-algebraic equations. (Spanish) (see 91j:00015)

Hill, David J. (with Mareels, Iven M. Y.) Stability theory for differential/algebraic systems with application to power systems. 91h:34079

Kabařkii, M. M. The inverse problem of the calculus of variations, and its application for integration of an ordinary second-order nonlinear differential equation. 91f:49048

Krakhota, V. V. (with Razmyslovich, G. P.) Linear systems with delay that are not solved with respect to the highest derivative. (Russian) 91f:34083

Krein, S. G. (with Utochkin, E. O.) An implicit canonical equation in a Hilbert space. 91d:34062

Lentini, M. (with März, Roswitha) Conditioning and dichotomy in differential algebraic equations. 91m:65197

Mareels, Iven M. Y. see Hill, David J. 91h:34079

März, Roswitha see Lentini, M. 91m:65197

Mertzios, B. G. see Christodoulou, M. A. 91f:93059

Oka, Hiroe see Chua, Leon O. 91a:58168

Razmyslovich, G. P. see Krakhota, V. V. 91f:34083

Shalenov, A. A. Elimination of topological degeneracies in systems of evolution differential equations. 91k:34048

Starun, I. I. A system with a degenerate matrix multiplying the derivative. 91k:34083

Utochkin, E. O. see Krein, S. G. 91d:34062

Zhang, Rong Ye Approximate solutions to first-order linear implicit operator differential equations. (Chinese. English summary) 91h:34096

### 34A10 Initial value problems: general existence and uniqueness theorems; continuous dependence of solutions on parameters, initial conditions and boundary conditions [see also 45D05] (1985)

Terent'ev, A. M. On the existence of single-valued integrals in a neighborhood of a complex singular point. (Russian) (see 91b:34004)

Items with secondary classifications in 34A10

Šapkarev, Ilja A. Existenz und Konstruktion der Polynomlösung der homogenen linearen Differentialgleichungen. (Macedonian summary) [Existence and construction of the polynomial solution of the homogeneous linear differential equations] (Not in MR)

Wu, Jin Gang Necessary and sufficient conditions for the existence of periodic solutions to Riccati equations with periodic coefficients. (Chinese. English summary) (Not in MR)

### 34A12 Initial value problems, existence, uniqueness, continuous dependence and continuation of solutions

Ad'yutov, M. M. Uniqueness of a positive solution of the Cauchy problem in the absence of the Lipschitz condition. (Russian) 91f:34002

— (with Klokov, Yu. A.; Mikhailov, A. P.) Some problems for an ordinary differential equation that arise in gas dynamics. 91c:34002

Afyan, S. K. A system of ordinary differential equations of noncanonical form. II. (Russian. English and Armenian summaries) 91k:34002

Athanassov, Zhivko S. Uniqueness and convergence of successive approximations for ordinary differential equations. 91f:34003

Bhaskar, T. Gnana see Venkatesulu, M. 91a:34006

Bressan, Alberto (with Colombo, Giovanni) Existence and continuous dependence for discontinuous O.D.E.s. (Italian summary) 91j:34004

Chen, Shao Zhi Terminal value problems for  $x'' = f(t, x, x')$ . 91b:34005

Colombo, Giovanni see Bressan, Alberto. 91j:34004

Filippov, V. V. Cauchy problem theory for an ordinary differential equation from the point of view of general topology. (Russian) 91k:34003

Frigon, Marlène (with O'Regan, Donal) Some remarks on the interval of existence of solutions to first order initial value problems. 91d:34003

Hassan, Nizar (with Rzymowski, Witold) On the Cauchy problem for ordinary differential equations with discontinuous right-hand sides. 91j:34005

- (with Rzymowski, Witold) An ordinary differential equation in nonlinear programming. 91j:34006
- Ha, Shou Chuan Differential equations with discontinuous right-hand sides. 91m:34006
- Kaleva, Osmo The Cauchy problem for fuzzy differential equations. 91f:34004
- Klokov, Yu. A. *see* Ad'yutov, M. M.; et al., 91e:34002
- Lu, Wen Duan *see* Xu, Hong Lian, 91i:34004
- Majorana, Armando A uniqueness theorem for  $y' = f(x, y)$ ,  $y(x_0) = y_0$ . 91d:34004
- Mikhailov, A. P. *see* Ad'yutov, M. M.; et al., 91e:34002
- Mikhailov, L. G. Some systems of singular differential equations. (Russian. Tajiki summary) (Not in MR)
- Mirzoev, K. A. Conditions for the existence of a solution to the equation  $y'' = qy$  that does not belong to the space  $\mathcal{L}^p(0, +\infty)$ . 91e:34003
- O'Regan, Donal *see* Frigon, Marlène, 91d:34003
- Rachůnková, Irena On a nonlinear problem for third-order differential equations. (Russian and Czech summaries) 91d:34005
- Rzymowski, Witold *see* Hassan, Nizar, 91j:34005 and 91j:34006
- Sesekia, A. N. Integral funnel of discontinuous solutions of an ordinary differential equation. (Russian) 91i:34002
- Shi, Jing Hua On the global existence and boundedness of solutions of differential equations in the region of  $V > 0$ . 91i:34003
- Venkatesulu, M. (with Bhaskar, T. Gnana) Solutions of initial value problems associated with a pair of mixed linear ordinary differential equations. 91d:34006
- Xu, Hong Lian (with Lu, Wen Duan) Initial value problems for a singular ordinary differential equation. (Chinese. English summary) 91i:34004
- Items with secondary classifications in 34A12
- Alaban, Fatih Résultats d'unicité pour une classe d'équations stationnaires en physique des semi-conducteurs et des membranes biologiques. (English summary) [Uniqueness results for a class of stationary equations in semiconductor and biological membrane physics] 91m:34008
- Bainov, D. D. *see* Dishliev, A. B., 91e:34011 and 91i:34013
- Borzyko, V. I. A uniqueness theorem of the type of Wend's theorem for differential equations with hysteresis nonlinearities. (Russian. Tajiki summary) 91b:34105
- Chaljub-Simon, Alice (with Volkmann, Peter) Un théorème d'existence et de comparaison pour des équations différentielles dans les espaces de fonctions bornées. (English summary) [An existence and comparison theorem for ordinary differential equations in spaces of bounded functions] 91b:34099
- Chikina, M. G. The continuous dependence of solutions of a class of discontinuous systems on a constraint. (Russian) 91i:34026
- Da Prato, Giuseppe Fully nonlinear equations in Banach spaces. 91a:34047
- Dishliev, A. B. (with Bainov, D. D.) Dependence upon initial conditions and parameter of solutions of impulsive differential equations with variable structure. 91e:34011
- (with Bainov, D. D.) Continuous dependence on the initial condition and a parameter of the solutions of a class of differential equations with variable structure and impulses. 91i:34013
- Frigon, Marlène Application de la théorie de la transversalité topologique à des problèmes non linéaires pour des équations différentielles ordinaires. [Applications of the theory of topological transversality to nonlinear problems for ordinary differential equations] 91i:34029
- Garay, Barnabas M. Sections of solution funnels and continuous dependence on initial conditions. 91e:34067
- An interpretation of Cellina's example: negligibility via the failure of Peano's theorem. 91i:34075
- Cross-sections of solution funnels in Banach spaces. 91k:34092
- Gl'f, M. I. Letter to the editor: "Conditions for the uniform well-posedness of the Cauchy problem for an equation with a variable operator in a Hilbert space" [Sibirsk. Mat. Zh. 28 (1987), no. 2, 50–54; MR 88g:34099]. 91i:34072
- Jódar, Lucas (with Navarro, E.) Solving singular regular systems  $A_2 X'' + A_1 X' + A_0 X = F(t)$  without increasing the dimension of the problem. 91m:34011
- Juang, Jong (with Nelson, Paul, Jr.) Abstract Riccati equations in an  $L^1$  space of finite measure and applications to transport theory. 91b:34100
- Kisilewicz, Michał Existence, uniqueness and continuous dependence of solutions of differential equations in Banach space. 91k:34093
- Lair, Alan V. Uniqueness for a nonlinear abstract Cauchy problem. 91f:34082
- Lin, Fa Xing Exponential dichotomies and roughness of linear systems. 91a:34009
- Lin, Yi Zhong Bounded solutions to quasilinear differential-difference equations with several advanced variables. (Chinese. English summary) 91a:34054
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- Fenchel, E. Transversal homoclinic points of a class of conservative diffeomorphisms. 91j:58095
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- Kuznetsov, Yuri Aleksandrovich Computation of invariant manifold bifurcations. 91j:65138
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- Luo, Ding Jun (with Zhu, De Ming) Stability of homoclinic loops and uniqueness of bifurcation limit cycles. (Chinese) 91d:58121
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- Ozorio de Almeida, Alfredo M. (with De Leon, N.; Mehta, Manish A.; Marston, C. Clay) Geometry and dynamics of stable and unstable cylinders in Hamiltonian systems. 91k:58043
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- Rodríguez-Luis, Alejandro J. (with Freire Macías, Emilio; Ponce, Enrique) A method for homoclinic and heteroclinic continuation in two and three dimensions. 91j:65139
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- Sakamoto, Kuniochi Invariant manifolds in singular perturbation problems for ordinary differential equations. 91j:34088
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- Reich, Sebastian On a geometric characterization of differential-algebraic equations. 91m:34005
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- Sternberg, Natalia One-to-oneness of the solution map in retarded functional-differential equations. 91f:58055
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- Filippov, M. G. Reducibility of systems of differential equations with almost periodic perturbation that are defined on an infinite-dimensional torus. (Russian. English summary) 91c:34088
- On the reducibility of systems defined on an infinite-dimensional torus. 91g:34017
- Klimenko, Yu. A. Control of transfer processes of a parametrically modulated nonlinear oscillator. (Russian) 91j:34049
- Oleinik, S. G. Algorithms for the numerical-analytical construction of multifrequency solutions of nonlinear differential systems. (Russian) 91h:34046
- Samoilenko, A. M. Reducibility of a system of linear differential equations with quasiperiodic coefficients. 91d:34039

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- Afsharnejad, Zahra Perturbations of the Mathieu equation within the class of Hill's equation. 91j:34066
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- Kimura, Yoshifumi Parametric motion of complex-time singularity toward real collapse. 91j:34067
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- Afawape, Anthony Uyi Uniform dissipativity of some fourth-order nonlinear differential equations. (Not in MR)
- Arima, Ovide (with Chérif, A. Aziz) Un système différentiel ordinaire qui fournit des solutions périodiques d'une équation à retard. (English summary) [An ordinary differential system that yields periodic solutions of a delay differential equation] 91k:34104
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- Candy, J. (with Rozmus, W.) A symplectic integration algorithm for separable Hamiltonian functions. 91m:70003
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- Kubyshkin, V. A. see Kneiler, D. V., (Not in MR)
- Liu, Zeng Rong (with Sun, Guo Zhang) Chaotic bands in a second-order system. (Chinese. English summary) 91h:58156
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- Olech, C. Global diffeomorphism question and differential equations. 91d:58016
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- Petrov, V. G. Mechano-mathematical model of cardiac fibre length-pressure pulsations. (Not in MR)
- Philippow, E. (with Büntig, E.; Vogt, Werner) Ein numerisches Transformationsverfahren für Relaxationschwingungen. [A numerical transformation method for relaxation vibrations] (Not in MR)
- Qin, Hua Shu see Wang, Chao Zhu; et al., 91m:70036
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- Vorčák, Jan  $D^{(0)}$ -dissipativity and  $D'$ -divergent solutions via translation. (Russian and Czech summaries) 91h:34010
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- Barabanov, N. E. Criteria for the asymptotic stability of systems of differential equations with periodic coefficients. (Russian) 91c:34067
- Baris, Ya. S. (with Lykova, O. B.) Integral manifolds and the reduction principle in stability theory. II. 91j:34069
- Cao, Qing Jie A study of the stability of linear periodic systems with respect to part of their variables. (Chinese. English summary) 91h:34071
- Chen, Bo Shan Asymptotic stability of nonautonomous systems. (Chinese) (Not in MR)
- Dayawansa, W. P. (with Martin, Clyde Franklin) Asymptotic stability of nonlinear systems with holomorphic structure. 91a:34034
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- Gorban', A. N. see Verbitskiĭ, V. I., 91d:34047
- Jon, Kim Choe Exponential asymptotic stability with respect to part of the variables for nonlinear systems of differential equations with impulse effects. (Korean. English summary) (Not in MR)
- Khusainov, D. Ya. see Yun'kova, E. A., 91m:34052
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- Leonov, G. A. Orbital stability and problems of nonlocal dynamics. 91f:34056
- Li, Guang Rong Stability of linear dynamical systems with variable coefficients. (Chinese. English summary) 91m:34051
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- Yun'kova, E. A. (with Khusainov, D. Ya.) A numerical algorithm for constructing an optimal Lyapunov function. (Russian) 91m:34052
- Zahreddine, Z. Asymptotic stability of complex systems of differential equations of higher dimensions. 91k:34051
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- Akhmetov, M. U. (with Perestyuk, N. A.) The comparison method for differential equations with impulse action. 91j:34019
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- Banichuk, N. V. (with Bratus', A. S.; Myshkis, A. D.) Destabilizing action of small dissipative forces on nonconservative systems. 91k:70020
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- Jin, Jun Existence and uniqueness of periodic solutions for fourth-order nonlinear periodic systems. 91k:34069
- Johnson, Russell A. Hopf bifurcation from nonperiodic solutions of differential equations. I. Linear theory. 91d:58182
- Karapetyan, A. V. The Routh theorem and its modifications. (Russian. English and Georgian summaries) 91g:70019
- Kharitonova, O. I. Determining admissible values for a parameter in studying the stability of gyroscopic systems. (Russian) 91m:70025
- Kirpichnikov, S. N. (with Stepanov, A. G.) On the possibility of the appearance of structurally stable global oscillators in the introduction of dissipative forces into dynamical systems that are asymptotically stable in the large. 91g:58149
- Knyazhishche, L. B. On conditions for the asymptotic stability of nonautonomous completely integrable equations. (Russian) 91a:34036
- Kuang, Yang Global stability of Gause-type predator-prey systems. 91g:92017
- Kur'mina, L. K. Simplified models in the dynamics of some singularly perturbed systems. (Russian) 91d:70011
- Lan, N. K. The mean  $p$ -th-order Lyapunov exponent of a regular system with white noise. (Russian) (Not in MR)
- Liao, Xiao Xin (with Wu, Wei Hua) The necessary and sufficient conditions of partial stability for linear dynamical systems. 91f:34063
- Lisovskaya, V. P. Periodic solutions of weakly nonlinear singularly perturbed systems of differential equations with impulse action. (Russian) 91g:34006
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- Perestyuk, N. A. see Akhmetov, M. U., 91j:34019
- Puzryev, V. E. On some special auxiliary functions in stability theory of motion. 91h:34080
- Rogozhenko, Yu. V. First approximation stability of solutions of evolution systems with impulses. (Russian) 91j:34099
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- Vyshenskaya, O. V. Integral sets of a class of differential equations with impulse action. 91k:34062
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- Yu, Yuan Hong (with Cheng, Wen Deng) On the boundedness and the stability properties of solution of certain fourth-order differential equations. 91j:34047
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Wu, Ming Lu Global stability of two classes of nonlinear systems. (Chinese. English summary) (Not in MR)

#### Items with secondary classifications in 34D08

- Ariaratnam, S. T. (with Xie, Wei Chau) Lyapunov exponents and stochastic bifurcations. (see 91m:70002)
- (with Xie, Wei Chau) Lyapunov exponent and rotation number of a two-dimensional nilpotent stochastic system. 91h:60086
- Arnold, Ludwig Towards a theory of nonlinear stochastic systems. 91m:60103
- (with San Martin, Luiz) A multiplicative ergodic theorem for rotation numbers. 91d:58127
- Stabilization by noise revisited. (German and Russian summaries) 91j:93119
- Chua, Leon O. see Parker, Thomas S., 91h:58161
- Davis, Peter C. see Uezu, Tatsuya, 91g:58194
- Feng, Xiangbo (with Loparo, Kenneth A.) Almost sure instability of the random harmonic oscillator. 91k:34085
- Geist, Karlheinz (with Parilitz, Ulrich; Lauterborn, Werner) Comparison of different methods for computing Lyapunov exponents. 91j:65136
- Karch, G. see Wedig, W., 91h:70024
- Lauterborn, Werner see Geist, Karlheinz; et al., 91j:65136
- Leizarowitz, Arie Exact results for the Lyapunov exponents of certain linear Ito systems. 91j:93120
- Loparo, Kenneth A. see Feng, Xiangbo, 91k:34085
- Parker, Thomas S. (with Chua, Leon O.) ★ Practical numerical algorithms for chaotic systems. 91h:58161
- Parilitz, Ulrich see Geist, Karlheinz; et al., 91j:65136
- San Martin, Luiz see Arnold, Ludwig, 91d:58127
- Schwarzer, P. Lyapunov exponents and point spectrum for two-dimensional canonical differential systems. 91k:34129
- Sokolov, D. V. Lyapunov exponent for the general Sturm-Liouville operator with random coefficients. I. Small disorder. 91k:34086
- Uezu, Tatsuya (with Davis, Peter C.) Novel scaling in sine circle map. 91g:58194
- Wedig, W. (with Karch, G.) Invariant Maße und Lyapunovzahlen für Oszillatoren mit Parameterfluktuationen. [Invariant measures and Lyapunov numbers for oscillators with parameter fluctuations] 91h:70024
- Stability and bifurcation in stochastic systems. 91j:70028
- Wihstutz, V. Noise induced rotation. (German and Russian summaries) 91d:34059
- Xie, Wei Chau see Ariaratnam, S. T., 91h:60086 and (91m:70002)

#### 34D10 Perturbations

- Bainov, D. D. see Dishliev, A. B., 91k:34066 and Milev, N. V., 91k:34067
- Byaror, T. N. On the stability of nonlinear systems with constantly acting perturbations. (Russian) 91c:34069
- Dishliev, A. B. (with Bainov, D. D.) Uniform stability with respect to the impulse disturbances of the solutions of differential equations with impulses. 91k:34066
- Gu, Keqin (with Zohdy, M. A.; Loh, Nan K.) Necessary and sufficient conditions of quadratic stability of uncertain linear systems. 91d:34050
- Khammetov, K. (with Kenzhegulov, B. Z.; Khammetov, A.) On an investigation of the stability of motion of some essentially nonlinear systems of differential equations. (Russian) (see 91k:00020)
- Kenzhegulov, B. Z. see Khammetov, K.; et al., (91k:00020)
- Khammetov, A. see Khammetov, K.; et al., (91k:00020)
- Loh, Nan K. see Gu, Keqin; et al., 91d:34050
- Milev, N. V. (with Bainov, D. D.) Stability of linear impulsive differential equations. 91k:34067
- Pinto, Manuel Variationally stable differential systems. 91j:34073
- Strogaya, G. V. Stability with respect to some of the variables of systems that decompose in the absence of perturbations. 91j:34074
- Taniguchi, Takeshi Stability theorems of perturbed linear ordinary differential equations. 91k:34052
- Yao, Bing Chun Some theorems on the stability of the zero solution to perturbed differential equations. (Chinese) 91k:34068
- Zohdy, M. A. see Gu, Keqin; et al., 91d:34050

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- Afsharnejad, Zahra Perturbations of the Mathieu equation within the class of Hill's equation. 91j:34066
- Avdeyuk, P. I. see Teplinskii, Ya. V., 91c:34060
- Banichuk, N. V. (with Bratus', A. S.; Myshkis, A. D.) The effects of stabilization and destabilization in nonconservative systems. 91e:70054
- Bermúdez S., J. E. see Repilado Ramírez, José Antonio; et al., 91d:34042
- Bratus', A. S. see Banichuk, N. V.; et al., 91j:70054
- de la C. Pérez, M. G. see Repilado Ramírez, José Antonio; et al., 91d:34042
- Duan, Guang Ren (with Wu, Guang Yu) Time domain analysis of stability robustness for linear systems. (Chinese) (Not in MR)
- Emelyanov, S. V. (with Zhivoglyadov, P. V.; Korovin, S. K.; Nikitin, S. V.) A semigroup approach to problems of describing a class of admissible perturbations. 91j:93076
- Gelig, A. Kh. Stabilization of impulse systems by periodic external action. 91e:93050

- Hinrichsen, D. (with Ilchmann, Achim; Pritchard, A. J.) Robustness of stability of time-varying linear systems. 91h:93122
- Ilchmann, Achim. *see* Hinrichsen, D.; et al., 91h:93122
- Kharitonova, O. I. Determining admissible values for a parameter in studying the stability of gyroscopic systems. (Russian) 91m:70025
- Korovin, S. K. *see* Emel'yanov, S. V.; et al., 91i:93076
- Liao, Shan Tao Perturbation of periodic orbits and stability problems in differential dynamics. (Chinese summary) 91k:58066
- Matveev, An. A. Stability of solutions of linear differential equations with random parameters. (Russian) (see 91k:00025)
- Mykhkha, A. D. *see* Banichuk, N. V.; et al., 91i:70054
- Nikitin, S. V. *see* Emel'yanov, S. V.; et al., 91i:93076
- Pritchard, A. J. *see* Hinrichsen, D.; et al., 91h:93122
- Replado Ramirez, José Antonio (with Bermúdez S., J. E.; de la C. Pérez, M. G.) Stability of the periodic solutions of a system of ordinary differential equations. (Spanish. English summary) 91d:34042
- Samoilenko, A. M. A study of a dynamical system in a neighborhood of a quasiperiodic trajectory. (Russian) 91h:34066
- Teplinskii, Yu. V. (with Avdeyuk, P. I.) The exponential stability of an invariant torus of a countable nonlinear system of differential equations. 91c:34060
- Wu, Guang Yu *see* Duan, Guang Ren. (Not in MR)
- Xiao, Hui Min Boundedness of discrete systems and their perturbed systems with respect to part of the variables. (Chinese. English summary) 91m:93089
- Zhaverchik, V. E. Stability of motion under the action of positional forces in the presence of third-order double resonance. (Russian. English summary) 91e:70062
- Zhivoglyader, P. V. *see* Emel'yanov, S. V.; et al., 91i:93076

### 34D15 Singular perturbations

- Bainov, D. D. *see* Simeonov, P. S., 91f:34060
- Markcheko, M. I. (with Rybashov, M. V.) Stability of singularly perturbed systems. 91j:34075
- Rybashov, M. V. *see* Markcheko, M. I., 91j:34075
- Simeonov, P. S. (with Bainov, D. D.) Exponential stability of the solutions of singularly perturbed systems with impulse effect. 91f:34060

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- Hsieh, Jer-Guang *see* Su, Juhng Perng. (Not in MR)
- Richardson, Stanley How not to tackle some singular perturbation problems. 91g:34025
- Su, Juhng Perng (with Hsieh, Jer-Guang) Composite feedback control for a class of nonlinear singularly perturbed systems with fast actuators. (Not in MR)
- Wihstutz, V. Noise induced rotation. (German and Russian summaries) 91d:34059

### 34D20 Lyapunov stability

- Abou-El-El, A. M. A. (with Sadeq, A. I.) A stability result for certain fourth order differential equations. 91e:34056
- (with Sadeq, A. I.) A stability result for the solutions of a certain system of fourth-order differential equations. 91m:34053
- Bainov, D. D. (with Dishliev, A. B.) Uniform stability with respect to the impulse hypersurfaces of the solutions of differential equations with impulses. 91k:34069
- *see also* Kulev, G. K., 91c:34037; 91b:34081; Dishliev, A. B., 91f:34061 and Kulev, G. K., 91i:34053
- Barabanov, N. E. Stability criteria for a class of systems of differential equations. 91h:34080
- Baris, Ya. S. (with Lykova, O. B.) Integral manifolds and the reduction principle in stability theory. 91m:34054
- Bulgakov, N. G. On the theory of the stability of periodic differential systems. (Russian. English summary) 91h:34078
- Cao, Qing Jie A study on partial stability of linear periodic systems. (Chinese. English summary) 91m:34055
- Cong, Shu Fan The sign characteristics of the second method of Lyapunov and their application. (Chinese. English summary) 91k:34070
- Deng, Gui Zhi *see* Yao, Wen Qi. (Not in MR)
- Dih, K. A. (with Galimov, N. E.) On Liapunov functions. (Not in MR)
- Dishliev, A. B. (with Bainov, D. D.) Investigation of the Lipschitz stability via limiting equations. 91f:34061
- *see also* Bainov, D. D., 91k:34069
- Galimov, N. E. *see* Dih, K. A. (Not in MR)
- Hilli, David J. (with Mareels, Iven M. Y.) Stability theory for differential/algebraic systems with application to power systems. 91h:34079
- Huang, Ming Qian Constructing Lyapunov functions for a class of fourth-order nonlinear systems. (Chinese. English summary) 91j:34076
- Jacyno, Z. Explicit direct solution of the Lyapunov matrix equation. 91a:34035
- Karimzhanov, A. *see* Martynuk, A. A., 91f:34065
- Khomenyuk, V. V. The method of recursive equations for coefficients of the expansion of a Lyapunov function in power series. (Russian) 91f:34062
- Kim, A. V. Invertibility of theorems of the method of Lyapunov functionals for systems with aftereffect. (Russian) 91m:34056
- Klebanov, B. S. The method of sectors in the proof of Lyapunov instability. 91c:34070
- Knyazhishche, L. B. On conditions for the asymptotic stability of nonautonomous completely integrable equations. (Russian) 91a:34036
- Krivoshchev, A. G. Estimates for the stability of motion by the method of differential inequalities for the Lyapunov function. (Russian) (see 91g:00030)
- Kulev, G. K. (with Bainov, D. D.) Stability of sets for systems with impulses. 91b:34081
- (with Bainov, D. D.) Global stability of sets for impulsive differential systems by Lyapunov's direct method. 91a:34037
- (with Bainov, D. D.) On the global stability of sets for impulsive differential systems by Lyapunov's direct method. 91i:34053
- Kumitayev, A. L. The influence of the resonant component dimension on the region of stability of the nonlinear periodic system. (see 91b:00051)
- Leonov, G. A. Orbital stability of trajectories of dynamical systems. (Russian) 91m:34057
- Li, Lin (with Xie, Da Lai) Stability of higher-dimensional nonlinear systems. (Chinese. English summary) 91j:34077
- Li, Wen Jian (with Yu, Yuan Hong) Instability theorems for some fourth-order and fifth-order differential equations. (Chinese. English summary) (Not in MR)
- Liao, Xiao Xin (with Wu, Wei Hua) The necessary and sufficient conditions of partial stability for linear dynamical systems. 91f:34063
- Liu, Xinzhi Stability theory for impulsive differential equations in terms of two different measures. 91m:34058
- Liu, Yong Qing *see* Xiao, Hui Min, 91h:34082
- Lykova, O. B. *see* Baris, Ya. S., 91m:34054
- Mareels, Iven M. Y. *see* Hilli, David J., 91h:34079
- Martynuk, A. A. Application of Lyapunov matrix-functions in studying the motion of systems with lumped and distributed parameters. (Russian. English summary) 91f:34064
- Analysis of stability problems via matrix Lyapunov functions. 91j:34078
- (with Karimzhanov, A.) Stability of large-scale systems with weakly interacting subsystems. 91f:34065
- Matveev, N. S. Refinement of estimates for the stability of motion by the method of several Lyapunov functions. (Russian) (see 91k:00019)
- Morozov, M. V. An algorithm for the analysis of the stability of linear periodic systems and its realization on a computer. 91c:34057
- Nadzieja, Tadek Construction of a smooth Lyapunov function for an asymptotically stable set. 91c:34071
- Nguyen Dinh Phyl Stability in the large of systems of two differential equations with nonstationary nonlinearities. I. 91m:34059
- Puzryev, V. E. On some special auxiliary functions in stability theory of motion. 91h:34080
- Ren, Chong Xun Deciding the stability of the zero solution to  $\dot{X} = AX$ . (Chinese. English summary) (Not in MR)
- Sadeq, A. I. *see* Abou-El-El, A. M. A., 91m:34053
- Sadeq, A. I. *see* Abou-El-El, A. M. A., 91c:34056
- Stepanov, A. V. On the modification of some of M. Araki's results. 91m:34060
- Stoffel, A. Application of Bloch analysis to the stability investigation of Hamiltonian systems of linear differential equations with periodic coefficients. (German and Russian summaries) 91h:34082
- Sun, Ju Jiang (with Zhu, Zhi) Necessary and sufficient conditions for global stability of nonlinear second-order systems. (Chinese. English summary) 91k:34071
- Tang, Aersilang Stability of time-varying systems. (Chinese) 91d:34051
- Tiryaki, Aydin Extension of an instability theorem for a certain fourth order differential equation. 91m:34061
- An instability theorem for a certain sixth order differential equation. (Not in MR)
- Tkhay, V. N. On the stability of reversible systems under inner resonance. (see 91b:00051)
- Tkhrchenko, I. E. Stability of the zero solution of a second-order nonlinear nonautonomous equation. 91j:34079
- Wu, Feng Guo Asymptotic stability for nonautonomous third-order systems. (Chinese. English summary) 91h:34081
- Asymptotic stability of nonstationary systems of order  $n$ . (Chinese. English summary) 91i:34054
- Wu, Wei Hua *see* Liao, Xiao Xin, 91f:34063
- Xiao, Hui Min (with Liu, Yong Qing) Partial exponential stability of large-scale system. (Chinese summary) 91h:34082
- Xie, Da Lai *see* Li, Lin, 91j:34077
- Xu, Dao Yi Errata: "Stability of linear systems with variable coefficients" [Acta Math. Sci. (Chinese) 7 (1987), no. 3, 341–348; MR 89e:34086]. (Chinese) 91d:34052
- Yao, Wen Qi (with Deng, Gui Zhi) A stability problem for a class of nonstationary systems in a critical case. (Chinese. English summary) (Not in MR)
- Yu, Yuan Hong *see* Li, Wen Jian. (Not in MR)
- Zampieri, Gaetano Solving a collection of free coexistence-like problems in stability. 91c:34058
- The last free coexistence-like problem. 91g:34024
- Zeng, Wei Yao On a problem of I. G. Malkin. (Chinese. English summary) 91k:34072
- Zhang, Meng Qiu Stability of solutions to nonlinear systems of equations with variable coefficients. (Chinese. English summary) 91m:34062
- Zhaverchik, V. E. A stability problem in one critical case. 91j:34080
- Zhong, Yi Lin New criteria for stability of some classes of time-varying systems. (Chinese) (Not in MR)
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- Artstein, Zvi On collective limit sets. 91f:34049
- Babkin, N. A. On stability in the large of a multidimensional system with delaying interactions. (Russian) 91j:93068
- Bacciotti, Andrea (with Stefani, Gianna) Homogeneous vector fields, stability, and Lie algebras. (Italian summary) 91m:58068
- Bainov, D. D. *see* Kulev, G. K., 91f:34012 and Lakshmikantham, V.; et al., 91m:34013
- Bajic, Vladimir B. Nonlinear functions and stability of motions of implicit differential systems. 91k:93058
- (Barmish, B. Ross) *see* Soh, Y. C., 91h:93129
- Beretta, Edoardo (with Capasso, V.) Global stability results for a multigroup SIR epidemic model. 91c:92074
- Biayarov, T. N. Stability and optimality of nonlinear systems on a finite time interval. (Russian) 91m:34063
- Blekhman, I. I. (with Malakhova, O. Z.) Extremal criteria for stability of certain motions. 91j:70019
- Borne, Pierre (with Richard, J.-P.; Tahiri, M.) Estimation of attractive domains for locally stable or unstable systems. 91i:93095
- Bryun, A. Z. A study of orbital stability by means of first integrals. 91e:70058
- Busemberg, Stavros (with van den Driessche, P.) Analysis of a disease transmission model in a population with varying size. 91c:92075

- Campanini, R. On the existence of periodic solutions. (Italian. English summary) 91g:34020
- Cao, Yu Lin The discrete Lyapunov function for scalar differential delay equations. 91j:34107
- Capasso, V. see Beretta, Edoardo, 91c:92074
- Chiang, Hsiao-Dong (with Fekih-Ahmed, Lazhar) A constructive methodology for estimating the stability regions of interconnected nonlinear systems. 91d:93067
- Chuang, Yao T'ang (with Yu, Tsai Chung) Robust pole-assignment for structured perturbation systems. 91i:93055
- De Oliveira, J. C. F. see Franca, L. N. F., 91h:70018
- van den Driessche, P. see Busenberg, Stavros, 91c:92075
- Duan, Kui Chen (with Teng, Zhi Dong) A note on an asymptotic stability theorem for ordinary differential equations. (Chinese. English summary) 91j:34070
- Fekih-Ahmed, Lazhar see Chiang, Hsiao-Dong, 91d:93067
- Foo, Y. K. see Soh, Y. C., 91h:93129
- Franca, L. N. F. (with De Oliveira, J. C. F.) Stability of some mechanical systems with dry friction. 91h:70018
- Freedman, H. I. (with Shukla, J. B.) The effect of a predator resource on a diffusive predator-prey system. 91h:92033
- (Fu, Minyue) see Soh, Y. C., 91h:93129
- Garaschenko, F. G. (with Pantaleon, L. A.) ★ Исследование задач практической устойчивости и чувствительности динамических систем, зависящих от параметров. (Russian) [A study of problems of practical stability and sensitivity of dynamical systems that depend on parameters] 91m:93092
- Goncharenko, V. I. Stabilization of the motion of an unstable linear mechanical system. 91c:70055
- Kalitin, B. S. Stability of nonautonomous dynamical systems. (Russian) 91g:58148
- Karapetyan, A. V. The Routh theorem and its extensions. 91c:70059
- Kato, Junji (with Pan, Jia Qi) Stability via the Liapunov function with a discontinuous derivative. 91h:34122
- Kim, A. V. On the Lyapunov functional method for systems with aftereffect. 91b:34129
- Klimova, E. V. Stabilization of a periodic system with a large parameter. (Russian) 91m:93103
- Kloeden, Peter E. (with Lorenz, Jens) Lyapunov stability and attractors under discretization. 91c:65187
- Knyazhishche, L. B. (with Raptunovich, N. A.) Partial localization of limit sets and the asymptotic stability of nonautonomous equations. II. 91h:34073
- Kosterin, A. B. A criterion for stability under the resonance  $1:3$ . 91j:34071
- Kulcsar, Stefan Boundedness, convergence and global stability of solutions of a nonlinear differential equation of the second order. 91h:34040
- Kuliev, G. K. (with Bainov, D. D.) Second method of Lyapunov and comparison principle for systems with impulse effect. 91f:34012
- Kulik, V. L. Existence of sign-variable Lyapunov functions for linear extensions of dynamical systems on a torus. 91h:34064
- see also Samoilenko, A. M., 91c:34006
- Lakshmikantham, V. (with Bainov, D. D.; Simeonov, P. S.) ★ Theory of impulsive differential equations. 91m:34013
- Trends in the theory of impulsive differential equations. 91a:93038
- Li, Ke Nan Extension and application of asymptotic stability theorems for differential equations. (Chinese. English summary) 91f:34057
- Liao, Xiao Xin Necessary and sufficient conditions for absolute stability of Lurie indirect control systems. 91m:93085
- Lorenz, Jens see Kloeden, Peter E., 91c:65187
- Lunga, Nicolae Periodic solutions for a nonlinear system. 91m:34047
- Malakhova, O. Z. see Blekhan, L. I., 91j:70019
- Mao, Xue Rong Lyapunov functions and almost sure exponential stability of stochastic differential equations based on semimartingales with spatial parameters. 91m:60117
- Martynuk, A. A. (with Obolenskii, A. Yu.) On the theory of one-sided models in spaces with arbitrary cones. 91j:93071
- Matrosov, V. M. The method of vector Lyapunov functions in nonlinear mechanics. (Russian. English summary) 91g:70018
- Matvichuk, K. S. The method of evolution equations in studying the technical stability of dynamical systems. 91j:34098
- Mekhamadiev, E. M. Some nonlocal properties of solutions of nonlinear differential equations. (Russian) 91d:34011
- Mukherjee, Debasis (with Roy, A. B.) Uniform persistence and global stability of two prey-predator pairs linked by competition. 91i:92007
- Namkoong, Gene see Selgrade, James F., 91h:92036
- Obolenskii, A. Yu. see Martynuk, A. A., 91j:93071
- Pachpatte, B. G. A note on Lyapunov type inequalities. 91a:34028
- Pan, Jia Qi see Kato, Junji, 91h:34122
- Pantaleon, L. A. see Garaschenko, F. G., 91m:93092
- Pinto, Manuel Variationally stable differential systems. 91j:34073
- Raptunovich, N. A. see Knyazhishche, L. B., 91h:34073
- Razumikhin, B. S. ★ Устойчивость эрeditaryных систем. (Russian) [Stability of hereditary systems] 91f:34101
- Richard, J.-P. see Borne, Pierre; et al., 91i:93095
- Roy, A. B. see Mukherjee, Debasis, 91i:92007
- Rumyantsev, V. V. see Vladimirov, V. A., 91c:70061
- (Saleh, Saad J.) see Soh, Y. C., 91h:93129
- Samoilenko, A. M. (with Kulik, V. L.) Systems of linear differential equations that are regular on the whole axis. 91c:34006
- Selgrade, James F. (with Namkoong, Gene) Stable periodic behavior in a pioneer-climax model. 91h:92036
- Shchennikov, V. N. On the solution of a problem of programmed control. (Russian) 91f:93090
- Shostakov, A. A. ★ Обобщенный прямой метод Ляпунова для систем с распределенными параметрами. (Russian) [The generalized direct Lyapunov method for systems with distributed parameters] 91d:58232
- Shukla, J. B. see Freedman, H. I., 91h:92033
- Simeonov, P. S. see Lakshmikantham, V.; et al., 91m:34013
- Smirnov, G. V. Weak asymptotic stability of differential inclusions. I. 91f:34018
- Weak asymptotic stability of differential inclusions. II. 91j:34026
- Soh, Y. C. (with Foo, Y. K.) Comments on "Stability of a polytope of matrices: counterexamples" [IEEE Trans. Automat. Control 33 (1988), no. 6, 569–572; MR 89g:93084] by B. R. Barmish, M. Fu and S. Saleh. 91h:93129
- Sosnitskii, S. P. On the structural instability of the equilibrium of systems with gyroscopic forces. (Russian) 91g:70021
- Stefani, Gianna see Bacciotti, Andrea, 91m:58088
- Strogaya, G. V. Stability with respect to some of the variables of systems that decompose in the absence of perturbations. 91j:34074
- Semenov, E. A. An algorithm for constructing a minimal set of fundamental conditions in the comparison method. (Russian) 91j:93095
- Tahiri, M. see Borne, Pierre; et al., 91i:93095
- Teng, Zhi Dong see Duan, Kui Chen, 91j:34070
- Vladimirov, V. A. (with Rumyantsev, V. V.) On the inversion of the Lagrange theorem for a rigid body with a cavity containing a viscous fluid. 91c:70061
- Vorotnikov, V. I. Optimal stabilization of motion with respect to some of the variables. (Russian) 91k:93075
- Wu, Yong Xian (with Zhao, Su Xia) Necessary and sufficient conditions for the existence of Liapunov function of Lur'e form with  $\dot{V} \leq 0$ . 91j:93097
- Yakubovich, V. A. Methods of the theory of absolute stability in invariance problems. (Russian) 91k:93062
- Yano, Makoto von Neumann facets and the dynamic stability of perfect foresight equilibrium paths in neo-classical trade models. 91d:90017
- Yu, Tsai Chung see Chuang, Yao T'ang, 91i:93055
- Zaitsev, V. V. Estimates for the evolutions of sets of dynamical systems. (Russian) 91h:58136
- Zhang, Meng Qiu A necessary and sufficient condition for absolute stability of some classes of direct control systems. (Chinese. English summary) 91h:93150
- Zhang, Shu Nian Unified stability theorem in RFDE and NFDE. 91m:34103
- Zhao, Su Xia see Wu, Yong Xian, 91j:93097
- Zhaverchik, V. E. Stability of motion under the action of positional forces in the presence of third-order double resonance. (Russian. English summary) 91c:70062
- Zabov, V. I. Normal form of the phase space of a mechanical system. 91h:34043
- Asymptotic self-oscillations. 91k:34061

### 34D25 Popov-type stability

- Chen, Guang Yi (with Shen, Cheng Min) Hyperglobal asymptotic stability. (Chinese. English summary) (Not in MR)
- Rimskii, G. V. (with Shirinskii, V. P.) A computer-oriented method for analyzing the absolute stability of automatic control systems with two nonlinearities. (Russian) (Not in MR)
- Shen, Cheng Min see Chen, Guang Yi, (Not in MR)
- Shirinskii, V. P. see Rimskii, G. V., (Not in MR)
- Tomberg, E. A. A frequency criterion for dissipativity in the degenerate case for systems with several nonlinearities. 91b:34083
- Wu, Wei Hua see Zhang, Wei, 91c:34059
- Zhang, Wei (with Wu, Wei Hua) Global asymptotic stability of higher-order nonlinear autonomous differential equations. (Chinese. English summary) 91c:34059

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- Alpanov, Sh. A. A frequency criterion for the stability of control systems with two nonstationary nonlinearities. (Russian) 91c:93064
- Barabanov, N. E. New criteria for absolute stability and instability of automatic control systems with a differentiable nonlinearity. (Russian) 91h:93132
- Khargonekar, Pramod P. (with Petersen, Ian R.; Zhou, Kemin) Robust stabilization of uncertain linear systems: quadratic stabilizability and  $H^\infty$  control theory. 91c:93077
- Petersen, Ian R. see Khargonekar, Pramod P.; et al., 91c:93077
- Yungler, I. B. Criteria for the absolute stability of automatic systems with vector nonlinear blocks. 91c:93065
- Zhou, Kemin see Khargonekar, Pramod P.; et al., 91c:93077

### 34D30 Structural stability and analogous concepts [see also 58F10, 58F12]

- Lin, Fa Xing Almost periodic structurally stable [structural stability] of almost periodic differential equations. 91b:34004
- Shi, Jin Lin A condition for structural stability and topological equivalence near equilibrium points of nonautonomous systems. (Chinese) 91j:34081

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## 35-XX Partial differential equations

### 35-00 General reference works (handbooks, dictionaries, bibliographies, etc.)

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- Bagrov, V. G. (with Gitman, D. M.) ★ Exact solutions of relativistic wave equations. 91d:35178  
 Gitman, D. M. see Bagrov, V. G., 91d:35178

### 35-01 Instructional exposition (textbooks, tutorial papers, etc.)

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- (Amson, John C.) see Dautray, Robert, 91h:00004a  
 (Artola, Michel) see Dautray, Robert, 91h:00004a  
 (Boron, Leo F.) see Zeidler, Eberhard, 91b:47001 and 91b:47002  
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 Choquet-Bruhat, Yvonne (with DeWitt-Morette, Cécile) ★ Analysis, manifolds and physics. Part II. 91e:58001  
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 — ★ Nonlinear functional analysis and its applications. II/B. 91h:47002

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- Babin, A. V. ★ Iterations of differential operators. 91j:35001  
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 Gardner, R. A. Topological methods for the study of travelling wave solutions of reaction diffusion systems. (see 91h:35006)  
 Goldstein, Jerome A. ★ Three Lectures on Applied Analysis. 91k:35001  
 Gillebeck, Klaus (with Sprössig, Wolfgang) ★ Quaternionic analysis and elliptic boundary value problems. 91h:35002a  
 — (with Sprössig, Wolfgang) ★ Quaternionic analysis and elliptic boundary value problems. 91h:35002b  
 Hörmander, Lars ★ The analysis of linear partial differential operators. I. 91m:35001a  
 — ★ The analysis of linear partial differential operators. I. 91m:35001b  
 John, Fritz ★ Nonlinear wave equations, formation of singularities. 91g:35001  
 Kazdan, Jerry L. Some topics in the study of elliptic equations. 91j:35002  
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 Lin, Tai-Ping Nonlinear hyperbolic-parabolic partial differential equations. (see 91h:35005)  
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- Pitter, Rudolf ★ Knotenmengen und Symmetrieeigenschaften von Lösungen einer Klasse semilinear elliptischer Differentialgleichungen. (German) [Nodal sets and symmetry properties of solutions of a class of semilinear elliptic differential equations] 91e:35001
- Skrypnik, I. V. Higher-order nonlinear elliptic equations. (Russian) 91j:35003
- Sprössig, Wolfgang see Gürlbeck, Klaus, 91k:35002a and 91k:35002b
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- Verlan', A. F. (with Moskalyuk, S. S.) ★ Математическое моделирование непрерывных динамических систем. (Russian) [Mathematical modeling of continuous dynamical systems] 91h:35002
- Winfree, Arthur T. Vortices in motionless media. 91m:35002
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- Frank, Léonid S. ★ Singular perturbations. I. 91i:58144
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- (Kasahara, K.) see Current topics in partial differential equations, 91m:35003
- Kopachevskii, N. D. (with Krein, S. G.; Ngô Huy Can) ★ Операторные методы в линейной гидродинамике. (Russian) [Operator methods in linear hydrodynamics] 91h:76001
- Krein, S. G. see Kopachevskii, N. D.; et al., 91h:76001
- Kreiss, Heinz-Otto (with Lorenz, Jens) ★ Initial-boundary value problems and the Navier-Stokes equations. 91a:35138
- (Kupčev, L. P.) see Gilbarg, D., 91e:35071
- Lorenz, Jens see Kreiss, Heinz-Otto, 91a:35138
- Maslov, V. P. (with Mosolov, P. P.) ★ Уравнения одномерного баротропного газа. (Russian) [Equations of a one-dimensional barotropic gas] 91j:35230
- (Mizohata, Sigeru) see Current topics in partial differential equations, 91m:35003
- Mosolov, P. P. see Maslov, V. P., 91j:35230
- Ngô Huy Can see Kopachevskii, N. D.; et al., 91h:76001
- (Ohya, Yujiro) see Current topics in partial differential equations, 91m:35003
- Rassias, John M. ★ Lecture notes on mixed type partial differential equations. 91m:35162
- Rozenblyum, G. V. (with Solomyak, M. Z.; Shubin, M. A.) Spectral theory of differential operators. (Russian) 91h:35229b
- Sabitov, K. B. On a question on the generalized Tricomi problem that arises in the theory of the Laval nozzle. I. 91e:35150
- Sanchez Hubert, J. (with Sánchez-Palencia, E.) ★ Vibration and coupling of continuous systems. 91c:00018
- Sánchez-Palencia, E. see Sanchez Hubert, J., 91c:00018
- (Schulze, Bert-Wolfgang) see Symposium: Partial Differential Equations, 91m:35005
- (Shimokura, N.) see Current topics in partial differential equations, 91m:35003
- Shubin, M. A. see Rozenblyum, G. V.; et al., 91h:35229b
- Solomyak, M. Z. see Rozenblyum, G. V.; et al., 91h:35229b
- (Triebel, Hans) see Symposium: Partial Differential Equations, 91m:35005
- Trudinger, Neil S. see Gilbarg, D., 91e:35071

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#### Birthday:

- Mizohata, Sigeru ★ Current topics in partial differential equations. 91m:35003
- Current problems in mathematics. Fundamental directions ★ Современные проблемы математики. Фундаментальные направления. Том 64. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 64] 91h:35229a
- Current topics in partial differential equations ★ Current topics in partial differential equations. 91m:35003
- Holzhaus ★ Symposium "Partial Differential Equations". 91m:35005
- Itoji Nanki i Tekhniki ★ Современные проблемы математики. Фундаментальные направления. Том 64. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 64] 91h:35229a
- Symposium: Partial Differential Equations ★ Symposium "Partial Differential Equations". 91m:35005

### 35-03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 35-03

- Aksen'ev, L. A. (with Il'inskiĭ, N. B.) The history of the development of inverse boundary value problems in Kazan'. (Russian) (see 91i:01139)
- Gårding, Lars History of the mathematics of double refraction. 91i:01002
- Holzappel, R.-P. A voyage with three balloons. 91e:01004

Il'inskiĭ, N. B. see Aksen'ev, L. A., (91i:01139)

### 35-04 Explicit machine computation and programs (not the theory of computation or programming)

- Gerdt, V. P. (with Zharkov, A. Yu.) Computer classification of integrable coupled KdV-like systems. 91h:35003
- Keld, G. J. A triangularization algorithm which determines the Lie symmetry algebra of any system of PDEs. 91h:35004
- Repeta, V. K. Investigation by means of a computer of local symmetries of differential equations of mathematical physics. (Russian) 91f:35002
- Zharkov, A. Yu. see Gerdt, V. P., 91h:35003
- Items with secondary classifications in 35-04
- Bank, Randolph E. ★ PLTMG: a software package for solving elliptic partial differential equations. (Not in MR)
- Gerdt, V. P. (with Shabat, A. B.; Svinolupov, S. I.; Zharkov, A. Yu.) Computer algebra application for investigating integrability of nonlinear evolution systems. 91a:58002
- Gilbert, Robert P. see Thejll, P., (Not in MR)
- Goldstone, Herman H. (with von Neumann, John) On the principles of large scale computing machines. 91h:01095
- Hereman, Willy Application of a Macsyma program for the Painlevé test to the Fitzhugh-Nagumo equation. (see 91e:58004)
- (with Takaoka, Masanori) Solitary wave solutions of nonlinear evolution and wave equations using a direct method and MACSYMA. 91e:35177
- Nakao, Mitsuhiko T. A computational verification method of existence of solutions for nonlinear elliptic equations. 91g:35114
- von Neumann, John see Goldstone, Herman H., 91h:01095
- Shabat, A. B. see Gerdt, V. P.; et al., 91a:58002
- Svinolupov, S. I. see Gerdt, V. P.; et al., 91a:58002
- Takaoka, Masanori see Hereman, Willy, 91e:35177
- Thejll, P. (with Gilbert, Robert P.) The use of MACSYMA for solving elliptic boundary value problems. (German and Russian summaries) (Not in MR)
- Zharkov, A. Yu. see Gerdt, V. P.; et al., 91a:58002

### 35-06 Proceedings, conferences, collections, etc.

- (Brown, K. J.) see Reaction-diffusion equations, 91h:35006
- (Canuto, Claudio) see Spectral and high order methods for partial differential equations, 91E:35005
- (Fujita, Hiroshi) see Functional-analytic methods for partial differential equations, 91h:35005
- (Gamkrelidze, R. V.) see Current problems in mathematics. Fundamental directions, 91e:35002
- (Heywood, John G.) see Navier-Stokes equations, 91f:35003
- (Hoffmann, Karl-Heinz) see Free boundary value problems, 91m:35004
- (Ikebe, T.) see Functional-analytic methods for partial differential equations, 91h:35005
- (Kasahara, K.) see Current topics in partial differential equations, 91m:35003
- (Kato, Tosio) see Functional-analytic methods for partial differential equations, 91h:35005
- (Keyfitz, Barbara Lee) see Nonlinear evolution equations that change type, 91e:35004
- (Kirchgässner, Klaus) see Problems involving change of type, 91h:35001
- (Kuroda, S. T.) see Functional-analytic methods for partial differential equations, 91h:35005
- (Lacey, Andrew A.) see Reaction-diffusion equations, 91h:35006
- (Ladzhenskaya, O. A.) see Boundary value problems of mathematical physics. (Not in MR)
- (Liu, Feng-Chi) see Nonlinear analysis, 91k:35005
- (Liu, Tai-Ping) see Nonlinear analysis, 91k:35005
- (Masuda, Kyōya) see Navier-Stokes equations, 91f:35003
- (Mitropol'skii, Yu. A.) see Mathematical modeling of physical processes, 91e:35003
- (Mizohata, Sigeru) see Current topics in partial differential equations, 91m:35003
- (Ohya, Yujiro) see Current topics in partial differential equations, 91m:35003
- (Quarteroni, Alfio) see Spectral and high order methods for partial differential equations, 91E:35005
- (Rasulov, M. L.) see Application of the path integral method to the solution of mixed problems for partial differential equations, 91k:35003
- (Rautmann, R.) see Navier-Stokes equations, 91f:35003
- (Schulze, Bert-Wolfgang) see Symposium: Partial Differential Equations, 91m:35005
- (Shearer, Michael) see Nonlinear evolution equations that change type, 91e:35004
- (Shimokura, N.) see Current topics in partial differential equations, 91m:35003
- (Solonnikov, V. A.) see Navier-Stokes equations, 91f:35003
- (Sprekels, Jürgen) see Free boundary value problems, 91m:35004
- (Talent, Giorgio) see Symposia Mathematica, 91h:35002
- (Triebel, Hans) see Symposium: Partial Differential Equations, 91m:35005
- (Vrator, V. N.) see Application of the methods of functional analysis in equations of mathematical physics, 91g:35004

Items listed otherwise than by author

- Application of the methods of functional analysis in equations of mathematical physics ★ Применение методов функционального анализа в уравнениях математической физики. (Russian) [Application of the methods of functional analysis in equations of mathematical physics] 91g:35004
- Application of the path integral method to the solution of mixed problems for partial differential equations ★ Применение метода контурного интеграла к решению смешанных задач для дифференциальных уравнений в частных производных. (Russian) [Application of the path integral method to the solution of mixed problems for partial differential equations] 91k:35003
- Birthday: Mizohata, Sigeru ★ Current topics in partial differential equations. 91m:35003
- Boundary value problems of mathematical physics ★ Краевые задачи математической физики. 14. (Russian) [Boundary value problems of mathematical physics. 14] (Not in MR)
- Cómo ★ Spectral and high order methods for partial differential equations. 91E:35005

## Conference:

- Free Boundary Problems: Numerical Treatment and Optimal Control** ★ Free boundary value problems. 91m:35004
- Functional Analysis and its Application** ★ Functional-analytic methods for partial differential equations. 91h:35005
- Geometry of Solutions to Partial Differential Equations** ★ Symposia Mathematica. Vol. XXX. 91h:35002
- Navier-Stokes Equations** ★ The Navier-Stokes equations. 91f:35003
- Nonlinear Analysis** ★ Nonlinear analysis. 91k:35005
- Partial Differential Equations** ★ Journées "Équations aux Dérivées Partielles". (French) [Proceedings of the Conference on Partial Differential Equations] 91e:35005
- Problems Involving Change of Type** ★ Problems involving change of type. 91h:35001
- Spectral and High Order Methods for Partial Differential Equations** ★ Spectral and high order methods for partial differential equations. 91f:35005
- Cartona** ★ Symposia Mathematica. Vol. XXX. 91h:35002
- Current problems in mathematics. Fundamental directions** ★ Современные проблемы математики. Фундаментальные направления. Том 34. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 34] 91e:35002
- Current topics in partial differential equations** ★ Current topics in partial differential equations. 91m:35003
- Edinburgh** ★ Reaction-diffusion equations. 91h:35006
- Evolution equations and applications to nonlinear problems** ★ Hatten hōteishiki to hisenkei mondai e no ōyo. [Evolution equations and applications to nonlinear problems] 91k:35004
- Free boundary value problems** ★ Free boundary value problems. 91m:35004
- Functional-analytic methods for partial differential equations** ★ Functional-analytic methods for partial differential equations. 91h:35005
- Holzhausen** ★ Symposium "Partial Differential Equations". 91m:35005
- Itogi Nauki i Tekhniki** ★ Современные проблемы математики. Фундаментальные направления. Том 34. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 34] 91e:35002
- Lecture Notes in Mathematics** ★ The Navier-Stokes equations. 91f:35003
- ★ Functional-analytic methods for partial differential equations. 91h:35005
- Lecture Notes in Physics** ★ Problems involving change of type. 91h:35001
- Lisbon** ★ Workshop on Hyperbolic Systems and Mathematical Physics. 91g:35005
- Mathematical modeling of physical processes** ★ Математическое моделирование физических процессов. (Russian) [Mathematical modeling of physical processes] 91e:35003
- Navier-Stokes equations** ★ The Navier-Stokes equations. 91f:35003
- Nonlinear analysis** ★ Nonlinear analysis. 91k:35005
- Nonlinear evolution equations that change type** ★ Nonlinear evolution equations that change type. 91e:35004
- Oberwolfach** ★ The Navier-Stokes equations. 91f:35003
- ★ Free boundary value problems. 91m:35004
- Problems involving change of type** ★ Problems involving change of type. 91h:35001
- Proceedings:**
- Conference on Partial Differential Equations** ★ Journées "Équations aux Dérivées Partielles". (French) [Proceedings of the Conference on Partial Differential Equations] 91e:35005
- Reaction-diffusion equations** ★ Reaction-diffusion equations. 91h:35006
- Rosario** ★ III Seminario sobre Problemas de Frontera Libre y sus Aplicaciones. (Spanish) [Third Seminar on Free Boundary Value Problems and their Applications] 91k:35006
- Saint Jean de Monts** ★ Journées "Équations aux Dérivées Partielles". (French) [Proceedings of the Conference on Partial Differential Equations] 91e:35005
- Seminar:**
- Free Boundary Value Problems and their Applications** ★ III Seminario sobre Problemas de Frontera Libre y sus Aplicaciones. (Spanish) [Third Seminar on Free Boundary Value Problems and their Applications] 91k:35006
- Partial Differential Equations** ★ Séminaire sur les Équations aux Dérivées Partielles. 1989-1990. (French) [Seminar on Partial Differential Equations. 1989-1990] 91f:35004
- Spectral and high order methods for partial differential equations** ★ Spectral and high order methods for partial differential equations. 91f:35005
- Stuttgart** ★ Problems involving change of type. 91h:35001
- Symposia Mathematica** ★ Symposia Mathematica. Vol. XXX. 91h:35002
- Symposium:**
- Evolution Equations and Applications to Nonlinear Problems** ★ Hatten hōteishiki to hisenkei mondai e no ōyo. [Evolution equations and applications to nonlinear problems] 91k:35004
- Partial Differential Equations** ★ Symposium "Partial Differential Equations". 91m:35005
- Reaction-Diffusion Equations** ★ Reaction-diffusion equations. 91h:35006
- Spectral and Scattering Theory** ★ Functional-analytic methods for partial differential equations. 91h:35005
- Taipei** ★ Nonlinear analysis. 91k:35005
- Tokyo** ★ Functional-analytic methods for partial differential equations. 91h:35005
- Workshop:**
- Hyperbolic Systems and Mathematical Physics** ★ Workshop on Hyperbolic Systems and Mathematical Physics. 91g:35005
- Items with secondary classifications in 35-06**
- (Aizagaliev, S. A.) see Control of dynamical systems, 91h:00026
- (Berger, Melvyn S.) see Mathematics of nonlinear science, 91e:00026
- (Boccardo, Nino) see Partially integrable evolution equations in physics, 91e:58004
- (Carillo, Sandra) see Nonlinear evolution equations and dynamical systems, 91f:58001
- (Comte, Robert) see Partially integrable evolution equations in physics, 91e:58004
- (Doust, Ian) see Miniconference: Operators in Analysis, 91h:00045
- (Elaydi, Saber) see Differential equations, 91m:00031
- (Engelbrecht, Jüri K.) see Nonlinear waves in active media, 91h:00044
- (Exner, Pavel) see Schrödinger operators, standard and nonstandard, 91j:81005

- (Fushchich, V. I.) see Symmetry and solutions of equations of mathematical physics, 91h:00038
- (Gamkrelidze, R. V.) see Current problems in mathematics. Fundamental directions, 91h:35229a
- (Hoffmann, Karl-Heinz<sup>1</sup>) see Free boundary problems: theory and applications, 91g:00043 and 91g:00044
- (Jefferies, Brian) see Miniconference: Operators in Analysis, 91h:00045
- (Kahn, Robert V.) see Random media and composites, 91h:00052
- (Li, Chun<sup>2</sup>) see Miniconference: Operators in Analysis, 91h:00045
- (McIntosh, Alan) see Miniconference: Operators in Analysis, 91h:00045
- (Milman, Marie) see Harmonic analysis and partial differential equations, 91e:00023
- (Milton, Graeme W.) see Random media and composites, 91h:00052
- (Ragnisco, O.) see Nonlinear evolution equations and dynamical systems, 91f:58001
- (Schonbek, Tomas) see Harmonic analysis and partial differential equations, 91e:00023
- (Schulze, Bert-Wolfgang) see Seminar: Analysis, Karl-Weierstrass-Institute of Mathematics, 91f:58002
- (Šeba, Petr) see Schrödinger operators, standard and nonstandard, 91j:81005
- (Sprekels, Jürgen) see Free boundary problems: theory and applications, 91g:00043 and 91g:00044
- (Streit, Ludwig) see Mathematics + physics, 91e:00014
- (Triebe, Hans) see Seminar: Analysis, Karl-Weierstrass-Institute of Mathematics, 91f:58002
- (Ural'tseva, N. N.) see Nonlinear equations and variational inequalities. Linear operators and spectral theory, 91e:00016
- (Volkodavov, V. F.) see Classical and nonclassical boundary value problems for partial differential equations, special functions, integral equations and their applications, (Not in MR)
- (Zakharov, V. E.) see What is integrability, 91k:58005

Items listed otherwise than by author

## All-Union Conference:

- Classical and Nonclassical Boundary Value Problems for Partial Differential Equations, Special Functions, Integral Equations and their Applications** ★ Классические и неклассические краевые задачи для дифференциальных уравнений с частными производными, специальные функции, интегральные уравнения и их приложения. (Russian) [Classical and nonclassical boundary value problems for partial differential equations, special functions, integral equations and their applications] (Not in MR)
- Berlin** ★ Seminar Analysis of the Karl-Weierstrass-Institute of Mathematics. 1986/87. 91f:58002
- Boca Raton, FL** ★ Harmonic analysis and partial differential equations. 91e:00023
- Classical and nonclassical boundary value problems for partial differential equations, special functions, integral equations and their applications** ★ Классические и неклассические краевые задачи для дифференциальных уравнений с частными производными, специальные функции, интегральные уравнения и их приложения. (Russian) [Classical and nonclassical boundary value problems for partial differential equations, special functions, integral equations and their applications] (Not in MR)

## Colloquium:

- Free Boundary Problems: Theory and Applications** ★ Free boundary problems: theory and applications. Vol. I. 91g:00043
- ★ Free boundary problems: theory and applications. Vol. II. 91g:00044
- Nonlinear Waves in Active Media** ★ Nonlinear waves in active media. 91h:00046
- Colorado Springs, CO** ★ Differential equations. 91m:00031

## Conference:

- Differential Equations: Theory and Applications in Stability and Control** ★ Differential equations. 91m:00031
- Harmonic Analysis and Partial Differential Equations** ★ Harmonic analysis and partial differential equations. 91e:00023
- Partial Differential Equations and Geometry** ★ Conference on Partial Differential Equations and Geometry. 91h:00027
- Schrödinger Operators, Standard and Nonstandard** ★ Schrödinger operators, standard and nonstandard. 91j:81005

## Congress:

- Applied Mathematics** ★ Actas del XI C.E.D.Y.A. (Congreso de Ecuaciones Diferenciales y Aplicaciones)/I Congreso de Matemática Aplicada. (Spanish) [Proceedings of the XIth Congress on Differential Equations and Applications/First Congress on Applied Mathematics] 91j:00015
- Differential Equations and Applications** ★ Actas del XI C.E.D.Y.A. (Congreso de Ecuaciones Diferenciales y Aplicaciones)/I Congreso de Matemática Aplicada. (Spanish) [Proceedings of the XIth Congress on Differential Equations and Applications/First Congress on Applied Mathematics] 91j:00015

- Contemporary Mathematics** ★ Harmonic analysis and partial differential equations. 91e:00023

- ★ Mathematics of nonlinear science. 91e:00026

- Control of dynamical systems** ★ Управление динамическими системами. (Russian) [Control of dynamical systems] 91h:00026

- Current problems in mathematics. Fundamental directions** ★ Современные проблемы математики. Фундаментальные направления. Том 64. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 64] 91h:35229a

- Differential equations** ★ Differential equations. 91m:00031

- Dubna** ★ Schrödinger operators, standard and nonstandard. 91j:81005

- Free boundary problems: theory and applications** ★ Free boundary problems: theory and applications. Vol. I. 91g:00043

- ★ Free boundary problems: theory and applications. Vol. II. 91g:00044

- Harmonic analysis and partial differential equations** ★ Harmonic analysis and partial differential equations. 91e:00023

- Investigations on formula manipulation systems for differential equations** ★ Bibun hōteishiki no sōshikishōri shisutemu no kenkyū. (Japanese) [Investigations on formula manipulation systems for differential equations] 91k:00014

- Isee** ★ Free boundary problems: theory and applications. Vol. I. 91g:00043

- ★ Free boundary problems: theory and applications. Vol. II. 91g:00044

- Itogi Nauki i Tekhniki** ★ Современные проблемы математики. Фундаментальные

- направления. Том 64. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 64] 91h:35229a
- Kolybark **★** Nonlinear evolution equations and dynamical systems. 91f:58001
- Krylyshev **★** Классические и неклассические краевые задачи для дифференциальных уравнений с частными производными, специальные функции, интегральные уравнения и их приложения. (Russian) [Classical and nonclassical boundary value problems for partial differential equations, special functions, integral equations and their applications] (Not in MR)
- Leesburg, VA **★** Random media and composites. 91b:00052
- Les Houches **★** Partially integrable evolution equations in physics. 91e:58004
- Málaga **★** Actas del XI C.E.D.Y.A. (Congreso de Ecuaciones Diferenciales y Aplicaciones)/I Congreso de Matemática Aplicada. (Spanish) [Proceedings of the XIth Congress on Differential Equations and Applications/First Congress on Applied Mathematics] 91j:00015
- Mathematics + physics **★** Mathematics + physics. Vol. 3. 91e:00014
- Mathematics of nonlinear science **★** Mathematics of nonlinear science. 91e:00026
- Miniconference:
- Operators in Analysis **★** Miniconference on Operators in Analysis. 91b:00045
- NATO Advanced Study Institute:
- Partially Integrable Nonlinear Evolution Equations and their Physical Applications **★** Partially integrable evolution equations in physics. 91e:58004
- Nonlinear equations and variational inequalities. Linear operators and spectral theory **★** Нелинейные уравнения и вариационные неравенства. Линейные операторы и спектральная теория. (Russian) [Nonlinear equations and variational inequalities. Linear operators and spectral theory] 91e:00016
- Nonlinear evolution equations and dynamical systems **★** Nonlinear evolution equations and dynamical systems. 91f:58001
- Nonlinear waves in active media **★** Nonlinear waves in active media. 91b:00046
- Partially integrable evolution equations in physics **★** Partially integrable evolution equations in physics. 91e:58004
- Phoenix, AZ **★** Mathematics of nonlinear science. 91e:00026
- Proceedings:
- Congress on Applied Mathematics **★** Actas del XI C.E.D.Y.A. (Congreso de Ecuaciones Diferenciales y Aplicaciones)/I Congreso de Matemática Aplicada. (Spanish) [Proceedings of the XIth Congress on Differential Equations and Applications/First Congress on Applied Mathematics] 91j:00015
- Congress on Differential Equations and Applications **★** Actas del XI C.E.D.Y.A. (Congreso de Ecuaciones Diferenciales y Aplicaciones)/I Congreso de Matemática Aplicada. (Spanish) [Proceedings of the XIth Congress on Differential Equations and Applications/First Congress on Applied Mathematics] 91j:00015
- Random media and composites **★** Random media and composites. 91b:00052
- Schrödinger operators, standard and nonstandard **★** Schrödinger operators, standard and nonstandard. 91j:31005
- Seminar:
- Analysis, Karl-Weierstrass-Institute of Mathematics **★** Seminar Analysis of the Karl-Weierstrass-Institute of Mathematics. 1986/87. 91f:58002
- Session:
- Mathematics of Nonlinear Science **★** Mathematics of nonlinear science. 91e:00026
- Sydney **★** Miniconference on Operators in Analysis. 91b:00045
- Symmetry and solutions of equations of mathematical physics **★** Симметрия и решения уравнений математической физики. (Russian) [Symmetry and solutions of equations of mathematical physics] 91b:00038
- Symposium:
- Investigations on Formula Manipulation Systems for Differential Equations **★** Bibun hōtēshiki no sūshikishōri shisutemu no kenkyū. (Japanese) [Investigations on formula manipulation systems for differential equations] 91k:00014
- Tallinn **★** Nonlinear waves in active media. 91b:00046
- Torino **★** Conference on Partial Differential Equations and Geometry. 91h:00027
- What is integrability **★** What is integrability? 91k:58005
- Workshop:
- Nonlinear Evolution Equations and Dynamical Systems **★** Nonlinear evolution equations and dynamical systems. 91f:58001
- Random Media and Composites **★** Random media and composites. 91b:00052

## 35Axx General theory

### Items with secondary classifications in 35Axx

- Gromov, Mikhael L. **★** Дифференциальные соотношения с частными производными. (Russian) [Partial differential relations] 91e:53047
- (Mishachy, N. M.) *see* Gromov, Mikhael L., 91e:53047
- Zabov, V. I. **★** Колебания и волны. (Russian) [Oscillations and waves] 91h:34040

## 35A05 General existence and uniqueness theorems

- Boer, T. B. Uniqueness and regularity properties of linear operators and their applications. 91k:35001
- Hörmander, Lars On Sobolev spaces associated with some Lie algebras. (*see* 91m:35003)
- Khalil Ounails, Hella Unité du problème de Cauchy pour les opérateurs quasi-homogènes. [Uniqueness of the Cauchy problem for quasihomogeneous operators] 91e:35006
- Kim, Dohan *see* Lee, Eun Gu, 91i:35002
- Krekhtivskii, V. V. Uniqueness theorems for solutions of the Cauchy problem for equations with a Bessel operator. (Russian) (*see* 91e:35003)
- Lee, Eun Gu (*with* Kim, Dohan) The extension of solutions for the Cauchy problem in the complex domain. 91h:35002
- Mendoza, Ramón Uniqueness in the Cauchy problem for first-order linear PDEs. 91b:35003
- Nazarov, V. I. Solvability of linear differential equations in scales of Roumieu spaces that are constructed by means of a given unbounded linear operator. 91h:35007

Persson, Jan Quasianalytic classes, Holmgren's uniqueness theorem, Hamilton-Jacobi equations and the inverse function theorem. (*see* 91m:35003)

### Items with secondary classifications in 35A05

- Altan, Ş. Burhanettin Existence in nonlocal elasticity. (Russian and Polish summaries) 91h:73002
- Apakov, Yu. P. *see* Dzharashev, T. D., 91e:35143
- Chernyatin, V. A. On the classical solution of a mixed problem for the Schrödinger equation. (Russian) 91m:35068
- Existence of a classical solution of a mixed problem for a second-order one-dimensional parabolic equation. 91m:35100
- Cohon, D. K. On the minimal space of surjectivity question for linear transformations on vector spaces with applications to surjectivity of differential operators on locally convex spaces. 91j:47002
- Colombini, Ferruccio (*with* Jannelli, Enrico; Spagnolo, Sergio) Nonuniqueness examples for second order hyperbolic equations. (*see* 91m:35003)
- Dooley, A. H. Solvability of differential operators on semiradial semidirect products. 91h:22017
- Dyachkin, O. D. Some parabolic and elliptic equations in a Hilbert space. 91m:35232
- Dzharashev, T. D. (*with* Apakov, Yu. P.) The Gellerstedt problem for a parabolic-hyperbolic equation in a three-dimensional space. 91e:35143
- Hayashi, Nakao (*with* Saitoh, Saburo) Analyticity and global existence of small solutions to some nonlinear Schrödinger equations. 91h:35199
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### 35A99 None of the above, but in this section

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- Jensen, Robert Uniqueness criteria for viscosity solutions of fully nonlinear elliptic partial differential equations. 91f:35098
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- Furioli Martinelli, Antonella A continuation theorem for the solutions of the linear nonhomogeneous equation:  $z_{\bar{y}\bar{y}} + \sum_{i=1}^N x_i \lambda_i(x, y) z_{x_i y} + \mu(x, y) z_y + v(x, y) z + f(x, y) = \sum_{i,j=1}^N x_i x_j a_{ij}(x, y) z_{x_i x_j} + \sum_{i=1}^N x_i b_i(x, y) z_{x_i}$  ( $z = \{z_1, z_2, \dots, z_M\} \in \mathbb{C}^M$ ). (Italian summary) 91f:35057
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- *see also Duduchava, R. V.*; et al., (Not in MR)

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- Beirão da Veiga, H. Local energy inequality and singular set for weak solutions of the boundary nonhomogeneous Navier-Stokes problem. (see 91m:35003)
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- Karachik, V. V. (with Saidkarimova, G. U.). On the solvability of the Goursat problem for the linear Mangeron equation with constant coefficients. (Russian) (Not in MR)
- Langenbruch, Michael. Solution operators for partial differential equations in weighted Gevrey spaces. 91g:35063
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- Rüssmann, Helmut On an inequality for trigonometric polynomials in several variables. 91d:42001
- Saigo, Megumi (with Marichev, O. I.; Nguyen Thanh Hai) Asymptotic representations of Gaussian series  ${}_2F_1$ , Clausenian series  ${}_3F_2$ , and Appell series  $F_2$  and  $F_3$  near boundaries of their convergence regions. 91c:33006
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- Kaneoka, Akira Hartogs type extension theorem of real analytic solutions of linear partial differential equations with constant coefficients. (see 91h:46003)

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- Yeh, R. Z. Hyperholomorphic functions and higher order partial differential equations in the plane. 91a:30046

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- Fokas, A. S. see Mugan, U., 91j:35070
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- Gourdin, D. (with Kadri, H.) Théorème d'unicité pour un problème de Cauchy différentiel matriciel à caractéristique multiple. [Uniqueness theorem for a matrix differential Cauchy problem with multiple characteristics] (see 91m:35003)
- Kadri, H. see Gourdin, D., (91m:35003)

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- Amirat, Youcef (with Hamdache, Kamel; Ziani, Abdelhamid) Homogénéisation par décomposition en fréquences d'une équation de transport dans  $\mathbb{R}^n$ . (English summary) [Homogenization by decomposition into frequencies of a transport equation in  $\mathbb{R}^n$ ] 91j:35032
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- Esham, Benjamin F., Jr. (with Weinacht, Richard J.) Boundary conditions for viscoelastic flows. (Italian summary) 91k:76012
- Krylov, A. V. Justification of the method of internal averaging along characteristics of weakly nonlinear systems. I. (Russian. English and Lithuanian summaries) 91j:35013
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- Campanato, Sergio A Cordes type condition for nonlinear nonvariational systems. (Italian summary) 91d:35050
- Lions, Pierre-Louis Recent progress on first order Hamilton-Jacobi equations. 91d:35051
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- Ruzmetov, E. (with Pirov, R.) Consistency and manifolds of solutions of some systems of three partial differential equations with two unknown functions with three variables. (Russian. Tajiki summary) 91j:35073

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- Augustynowicz, A. (with Kamont, Zdzisław) On Kamke's functions in uniqueness theorems for first order partial differential-functional equations. 91j:35270
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- Dupuis, Paul (with Ishii, Hitoshi; Soner, H. Mete) A viscosity solution approach to the asymptotic analysis of queueing systems. 91g:35046
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- Vladimirov, V. S. (with Volovich, I. V.) Construction of local and nonlocal conservation laws for nonlinear field equations. (German summary) 91m:81096
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### 35F25 Initial value problems for nonlinear first-order PDE, nonlinear evolution equations

- Bardi, Martino (with Osher, Stanley) The nonconvex multidimensional Riemann problem for Hamilton-Jacobi equations. 91k:35056



- Gérard, Raymond (with Tahara, Hidetoshi) Nonlinear singular first order partial differential equations of Briot-Bouquet type. 91h:35084  
 Osher, Stanley see Bardi, Martino, 91h:35056  
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- Cardin, Franco On the geometrical Cauchy problem for the Hamilton-Jacobi equation. (Italian and Russian summaries) 91e:58192  
 Jaruszewska-Walczak, Danuta Existence of solutions of first order partial differential-functional equations. (Italian summary) 91h:35318  
 Panov, E. Yu. Measure-valued solutions of the Cauchy problem for a first-order quasilinear equation with an unbounded domain of dependency on the initial data. (Russian) 91m:35138

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- Ishii, Hitoshi A boundary value problem of the Dirichlet type for Hamilton-Jacobi equations. 91f:35071

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- Farky, L. S. Properties of phase functions and broken rays outside one convex and one nonconvex bodies. 91g:58283  
 Ha, Bei A free boundary problem for a Hamilton-Jacobi equation arising in ion etching. 91k:35256

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- Amirat, Youcef (with Hamdache, Kamel; Ziani, Abdelhamid) Étude d'une équation de transport à mémoire. (English summary) [On a first-order transport equation with memory] 91k:35057  
 Cohen, Donald S. (with White, Andrew B., Jr.) Sharp fronts due to diffusion and viscoelastic relaxation in polymers. 91k:35058  
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- Choi, Q-Hueng (with Jung, Tacksun; Kim, Jongsik) A necessary condition for the local solvability of the system of the Lewy type vector fields. 91k:35007  
 Gryk, Henryk The Feynman-Kac formula and the Hamilton-Jacobi equation. 91a:47056  
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#### 35Gxx General higher-order equations and systems

##### Items with secondary classifications in 35Gxx

- Bitsadze, A. V. ★ Some classes of partial differential equations. 91h:35001  
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#### 35G05 General theory of linear higher-order PDE

- Abdinazarov, S. Fundamental solutions of higher-order linear equations with multiple characteristics. (Russian) 91e:35069  
 Burskii, V. P. Boundary properties of  $L_2$ -solutions of linear differential equations and the equation-domain duality. (Russian) 91f:35072  
 Chen, Dong Gui Integral operators and systems of higher-order partial differential equations. (Chinese. English summary) 91m:35058  
 Chesnokov, I. Yu. Removable singularities of solutions of linear partial differential equations. 91m:35059  
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- Babaev, Azad A. see Shakhmuradov, V. B., 91m:35236  
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 Cai, Shang Bin A class of function spaces and their applications. (Chinese. English summary) 91m:46048  
 Nikolskii, E. V. Generalized functional-invariant solutions of a second-order multidimensional scalar equation of general form. (Russian) 91d:35044  
 Seymour, Brian R. (with Varley, Eric) A new approach to linear PDEs with variable coefficients. 91d:35003  
 Shafii-Moosavi, Morteza Functional dimension and hypoellipticity of differential operators with variable coefficients. 91g:35070  
 Shakhmuradov, V. B. (with Babaev, Azad A.) Coercive problems for an equation with parameters. (Russian) 91m:35236  
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 — Analyticity of linear one-parameter Lie-Bäcklund groups. 91j:58177

- Vainberg, B. R. Asymptotic behavior as  $t \rightarrow \infty$  of solutions of exterior mixed problems that are periodic with respect to  $t$ . 91e:35035  
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#### 35G10 Initial value problems for linear higher-order PDE, linear evolution equations

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- Dubinskii, Yu. A. The Cauchy problem and pseudo-differential operators in the complex domain. 91h:35344  
 Li, Zhi Bin A well-posed initial value problem for a class of partial differential equations on the Heisenberg group. (Chinese) 91a:58184  
 Selyuzova, F. G. Well-posedness classes for the solution of a Cauchy problem for equations that are well posed in the sense of I. G. Petrovskii. (Russian) 91m:35007

#### 35G15 Boundary value problems for linear higher-order PDE

- Borok, V. M. Quasiregular boundary value problems in a strip. 91g:35065  
 — (with Fardigola, L. V.) Nonlocal well-posed boundary value problems in a layer. 91g:35066  
 Dokuchaev, N. G. Solution of boundary value problems on a graph by the operational method. (Russian) 91k:35060  
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 — A boundary value problem for a system of third-order differential equations. (Russian) (Not in MR)  
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 Solov'ev, S. P. The boundary value problem  $\Delta_1^n$  for a third-order degenerate hyperbolic equation. (Russian) (see 91g:00034)  
 Tomasyan, N. E. Well-posed boundary value problems for systems of partial differential equations in a half-plane in a class of functions of polynomial growth. (Russian) 91h:35027

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- Abdinazarov, S. On a third-order equation. (Russian) 91e:35140  
 — see also Dzburav, T. D., 91e:35141  
 Boyarkin, D. I. Smoothness of solutions of a nonelliptic boundary value problem. (Russian) (see 91h:00036)  
 — (with Karashkina, N. A.) Closedness of a nonelliptic boundary operator. (Russian) (see 91h:00036)  
 Dzburav, T. D. (with Abdinazarov, S.) On a theory of equations with multiple characteristics. (Russian) 91e:35141  
 Gastaldi, Fabio (with Quarteroni, Alfio; Sacchi Landriani, Giovanni) On the coupling of two-dimensional hyperbolic and elliptic equations: analytical and numerical approach. 91m:65284  
 Karashkina, N. A. see Boyarkin, D. I., (91h:00036)  
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 Sinaiskii, E. S. The approximation method in a boundary value problem with partial derivatives. 91i:35007

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- Bakhvalov, N. S. (with Panasenkov, G. P.; Shtaras, A. L.) The averaging method for partial differential equations and its applications. (Russian) 91k:35061  
 Campanato, Sergio  $\mathcal{L}^{2,2}$  theory for nonlinear nonvariational differential systems. (Italian summary) 91i:35044  
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 Shubli, E. S. Isovector fields and similarity solutions for general balance equations. 91m:35062

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 Cacuci, D. G. (with Perez, R. B.; Protopenescu, V.) Extending Green's function formalism to general nonlinear equations. 91c:47121  
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Tran Huy Ho Propagation et interaction des singularités pour les équations hyperboliques semi-linéaires en dimension 1 d'espace. [Propagation and interaction of singularities for hyperbolic semilinear equations in one space dimension] 91a:35120

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### 35G30 Boundary value problems for nonlinear higher-order PDE

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— (with Sprössig, Wolfgang) ★ Quaternionic analysis and elliptic boundary value problems. 91k:35002b

Korman, Philip On existence of periodic solutions for a class of quasilinear noncoercive problems. 91h:35035

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### 35H05 Hypoelliptic equations and systems

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Beals, Richard Nonelliptic problems and complex analysis. 91a:35039

Bolley, P. (with Camus, J.; Rodino, Luigi) Hypoellipticité analytique-Gevrey et itérés d'opérateurs. [Analytic Gevrey hypoellipticity and iterates of operators] 91f:35073

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Cattabriga, Lamberto (with Rodino, Luigi; Zanghirati, Luisa) Analytic-Gevrey hypoellipticity for a class of pseudo-differential operators with multiple characteristics. 91a:35040

Che, Xiang Kai Hypo-ellipticity and local solvability of a class of differential operators. (Chinese. English summary) 91m:35064

Chen, Hua<sup>1</sup> Gevrey-hypoellipticity for a class of parabolic type operators. 91j:35075

Gérard, Patrick Moyennisation et régularité deux-microlocale. [Second-microlocal averaging and regularity] 91g:35068

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Hoshino, Toshihiko Hypoellipticity for infinitely degenerate elliptic and parabolic operators. II. Operators of higher order. 91a:35041

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Kwon, Kil H. (with Song, B. C.) Hypoellipticity of a complex vector fields system. 91h:35086

— Hypoellipticity of systems of pseudodifferential operators with double characteristics. 91h:35087

Nguyen Min<sup>1</sup> Chi On the global hypoellipticity property of a higher-order differential operator. 91g:35069

Nourrigat, J. Subelliptic systems. 91c:35040

Ōaku, Toshihiko Local solvability of Fuchsian elliptic equations for hyperfunctions. 91h:35088

Popivanov, Pet<sup>1</sup> R. Microlocal hypo-ellipticity of some classes of differential operators. (Bulgarian. English and Russian summaries) 91j:35076

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Tanabé, Susumu Quelques exemples d'opérateurs hypoelliptiques à caractéristiques doubles. [Some examples of hypoelliptic operators with double characteristics] 91a:35043

Xu, Chuan-yi On the heat kernel of a general subelliptic operator. (French summary) 91g:35071

— On the leading term of  $\text{tr}(e^{-tP})$  associated to a maximally hypoelliptic operator. (French summary) 91m:35065

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Cattabriga, Lamberto (with Zanghirati, Luisa) Global analytic and Gevrey surjectivity of the Mizohata operator  $D_2 + ix_2^2 D_1$ . 91a:35002

Fu, Chu Li Irreducible unitary representations for  $H_n \otimes \mathbb{R}^k$  and hypoellipticity of a class of left invariant differential operators. (Chinese. English summary) 91f:22011

Garofalo, Nicola (with Lanconelli, Ermanno) Frequency functions on the Heisenberg group, the uncertainty principle and unique continuation. (French summary) 91f:22014

— (with Lanconelli, Ermanno) Zero-order perturbations of the subelliptic Laplacian on the Heisenberg group and their uniqueness properties. 91h:35020

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Godin, Paul A discrete phenomenon in propagation of  $C^\infty$  singularities. 91a:35010

Gramcher, Todor V. (with Popivanov, Pet<sup>1</sup> R.) Local solvability of semilinear partial differential equations. (Italian summary) 91m:35006

Guan, Pengfei Hölder regularity of subelliptic pseudodifferential operators. 91h:35343

Heifler, B. (with Sjöstrand, Johannes) Équation de Schrödinger avec champ magnétique et équation de Harper. [The Schrödinger equation with magnetic field, and the Harper equation] 91g:35078

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Lévy-Bruhl, Pierre (with Mohamed, Abdérémame; Nourrigat, J.) Étude spectrale d'opérateurs sur des groupes nilpotents. [Spectral study of operators on nilpotent groups] (see 91f:35004)

Maire, H.-M. Comportement asymptotique des fonctions spectrales d'opérateurs différentiels. [Asymptotic behavior of the spectral functions of differential operators] 91f:35200

Milevskii, A. S. Similarity transformations and spectral properties of hypoelliptic pseudodifferential operators on the circle. 91b:58252

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Morimoto, Yoshinori Estimates for degenerate Schrödinger operators and an application for infinitely degenerate hypoelliptic operators. 91c:35105

Nagel, A. (with Ricci, Fulvio; Stein, Elias M.) Fundamental solutions and harmonic analysis on nilpotent groups. 91b:58279

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Popivanov, Pet<sup>1</sup> R. Local solvability and hypo-ellipticity of a class of pseudodifferential operators with double characteristics. (Not in MR)

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Rodino, Luigi On linear partial differential operators with multiple characteristics. (see 91m:35005)

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Smolkin, G. A. Hypoellipticity of a class of pseudodifferential operators. (Russian) (see 91b:00036)

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Veretennikov, A. Yu. Conditions for hypo-ellipticity and estimates for the rate of mixing for stochastic differential equations. 91a:60159

Vershik, A. M. (with Gershkovich, V. Ya.) A nonholonomic Laplace operator. (Russian) 91g:58287

Yan, Jia An On the existence of density of the law of a Wiener functional. 91a:60146

Yuan, Jian The Plancherel formula on the generalized Heisenberg group  $G_n$  and its applications. (Chinese) 91h:22013

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### 35Jxx Partial differential equations of elliptic type

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Gilberg, D. (with Trudinger, Neil S.) ★ Эллиптические дифференциальные уравнения с частными производными второго порядка. (Russian) [Elliptic partial differential equations of second order] 91c:35071

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### 35J05 Laplace equation, reduced wave equation (Helmholtz), Poisson equation [see also 31Axx, 31Bxx]

- Amini, S. *see* Ke, Chen, 91j:35079
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- Bolkovet, S. N. The Dirichlet problem for a nonlinearly perturbed system of Helmholtz equations. (Russian) (Not in MR)
- Caloz, Gabriel The model plasma problem: existence of a solution branch. 91g:35073
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- Higher order oblique derivatives problems on polyhedral domains. 91a:35047
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- Dore, Giovanni (with Venni, Alberto) An operational method to solve a Dirichlet problem for the Laplace operator in a plane sector. 91f:35075
- Edelstein, S. L. Estimates for and asymptotic behavior of solutions of a two-dimensional boundary value problem for the Helmholtz equation with a coefficient that depends weakly on a variable. (Russian) 91g:35074
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- Guo, Ding Hui Some notes on a class of eigenvalue problems. (Chinese. English summary) 91j:35077
- Guseinov, E. G. The Dirichlet problem for the Poisson equation in generalized weighted Hölder spaces. 91j:35078
- Herbst, Ira W. (with Zhao, Zhong Xin) Note on the 3G theorem ( $d = 2$ ): "Green functions and conditioned gauge theorem for a 2-dimensional domain" [in *Seminar on Stochastic Processes*, 1987 (Princeton, NJ, 1987), 283–294, Birkhäuser Boston, Boston, MA, 1988] by Zhao. 91e:35080
- Homma, Toshihisa *see* Tsuchimoto, M., (91b:00041)
- Huang, Lie De The modified Helmholtz equations and their boundary value problems. 91h:35090
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- McCoy, John J. (with Wales, Stephen C.) Another interpretation and derivation of one-way wave theories. 91f:35079
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- Nakhman, A. D. Generalized Dirichlet problem with a boundary function in the class  $L^p$ . (Russian) (see 91c:34069)
- Neffedov, B. N. Solvability of the vector Helmholtz equation in orthogonal coordinate systems. (Russian) 91f:35080
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- (with Weaver, Oliver L.) Necessary and sufficient condition on the fixed-energy scattering data for the potential to be spherically symmetric. 91a:35051
- Rempel, Stephan Corner singularity for transmission problems in three dimensions. 91f:35082
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- Saltanov, N. V. Analogues of generalized hydrodynamic potentials in the theory of the Helmholtz vector equation and the vector wave equation. (Russian) 91h:35091
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- Smagin, S. I. On a system of integral equations in diffraction theory. 91i:35050
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- Skrypnik, I. V. (with Skrypnik, I. I.) Behavior of solutions of quasilinear elliptic equations near a nonsmooth boundary. (Russian) 91b:35038

### 35J70 Elliptic partial differential equations of degenerate type

- Chanillo, S. (with Wheeden, Richard L.) Existence and estimates of Green's function for degenerate elliptic equations. 91b:35045
- Chen, Ya Zhe On degenerate Monge-Ampère equations in convex domains. 91b:35046
- Del Santo, Daniele Nonuniqueness in the Cauchy problem for a degenerate elliptic operator. (French summary) 91k:35083
- Dunar, Frank (with Fuchs, Martin<sup>2</sup>) Existenz und Regularität von Hyperflächen mit vorgeschriebener mittlerer Krümmung. (English summary) [Existence and regularity of hypersurfaces with prescribed mean curvature] 91h:35084
- Fabes, Eugene B. (with Garofalo, Nicola; Marin-Malave, S.; Salsa, S.) A Fatou theorem for the  $p$ -Laplacian. 91j:35112
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- Ji, Xin Hua Discussion on two different first boundary value problems for degenerate elliptic equations. (Chinese) 91a:35079
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- French, Donald A. On the convergence of finite-element approximations of a relaxed variational problem. 91f:65167
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- Godziev, M. M. An inverse problem for a degenerate elliptic equation. (Russian) (see 91g:35004)
- Guseinov, R. V. Asymptotic behavior of solutions of quasi-elliptic equations in unbounded domains of layer type. (Russian. English and Azerbaijani summaries) (Not in MR)
- Heinonen, Juha (with Kilpeläinen, Tero; Martio, Olli) Fine topology and quasilinear elliptic equations. (French summary) 91b:31015
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- Netas, Jindřich (with Roubíček, Tomáš) Approximation of a nonlinear thermoelastic problem with a moving boundary via a fixed-domain method. (Russian and Czech summaries) 91j:35290
- Negrini, Paolo Some remarks on capacity and the Wiener test for degenerate elliptic operators. (Italian summary) 91c:31006
- Root, Robert G. Boundary value problems for degenerate elliptic-parabolic equations of the fourth order. 91f:35186
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- Tungatarov, A. A class of elliptic systems in the plane with a singular point. 91j:35097
- Ughi, M. Properties of nonnegative solutions of a superdegenerate equation. (see 91g:00044)
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- Zhang, Gong An Maximum principles for solutions to mixed boundary value problems for second-order parabolic equations. (Chinese) 91k:35035

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- Arkhipova, A. A. Second derivatives of solutions of some variational inequalities connected with elliptic nondiagonal systems. (Russian) **91f:35120**
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- Chobanov, Georgi Iv. Variational inequalities, supersolutions, and solvability for a weakly nonlinear elliptic boundary value problem. (Russian summary) **91f:35121**
- Conrad, Francis (with Issard-Roch, Françoise) Loss of stability at turning points in nonlinear elliptic variational inequalities. **91i:35086**
- Dal Maso, Gianni (with Musina, Roberta) An approach to the thin obstacle problem for variational functionals depending on vector valued functions. **91e:35107**
- Ding, Shi Jin Regularity of solutions to quasilinear elliptic variational inequalities. (Chinese. English summary) **91f:35122**
- Dossunov, T. B. On the theory of quasilinear equations in divergence form. (Russian. Kazakh summary) **91k:35097**
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- Gastaldi, Fabio (with Gilardi, Gianni) A class of noncoercive variational inequalities. **91d:35088**
- Gilardi, Gianni see Gastaldi, Fabio, **91d:35088**
- Guo, You Zhong Inequality problems in solid mechanics. (Chinese) **91d:35089**
- Gustafsson, Björn (with Mossino, J.) Some isoperimetric inequalities in electrochemistry and Hele-Shaw flows. (see **91g:00044**)
- Ishii, Katsuyuki (with Yamada, Naoki) On the rate of convergence of solutions for the singular perturbations of gradient obstacle problems. **91k:35098**
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- Kaczynski, Tomasz On differential inclusions of second order. **91a:35080**
- Korman, Philip (with Leung, Anthony W.; Stojanovic, Srdjan) Monotone iterations for nonlinear obstacle problem. **91a:35108**
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- Nazarov, S. A. Elliptic inequalities for thin elastic bodies with a small friction coefficient. **91h:35139**
- Asymptotic solution of variational inequalities for a linear operator with a small parameter multiplying the highest derivatives. **91k:35099**
- Ricceri, Biagio A remark on quasilinear elliptic variational inequalities with discontinuous coefficients. (Italian summary) (Not in MR)
- Rodrigues, José-Francisco Some remarks on the quasi-linear noncoercive elliptic obstacle problem. **91e:35109**
- Schumann, Rainer Zur Regularität der Lösungen von Variationsungleichungen. [On the regularity of solutions of variational inequalities] **91i:35087**
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- Items with secondary classifications in 35J85
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- Barrett, John W. (with Elliott, Charles M.) Finite element approximation of a free boundary problem arising in the theory of liquid drops and plasma physics. (French summary) **91m:65269**
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- Hou, Chun Ze Existence of solutions to a class of variational inequalities—a monotone iteration method. (Chinese. English summary) **91a:49004**
- Issard-Roch, Françoise Substitutions, supersolutions, and asymptotic behavior of an evolution problem with unilateral constraint. **91i:49007**
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- Krätzschmar, Michael Elliptic variational inequalities of monotone kind. **91j:49012**
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- Lions, Pierre-Louis On the Schwarz alternating method. III. A variant for nonoverlapping subdomains. **91g:65226**
- Liu, Wen Bin (with Rubio, J. E.) Optimality conditions for elliptic variational inequalities. **91j:49013**
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- Vrdoljak, Božo Negative radial solutions of certain semilinear elliptic equations. (Serbo-Croatian summary) (see **91m:00027**)
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- Colli, Pierluigi (with Rodrigues, José-Francisco) A perturbation problem related to the highly compressible behaviour of a fluid in a thin porous layer. **91a:35081**
- Osmolovskii, V. G. An analogue of Weyl's decomposition for first-order operators. (Russian) **91f:35123**
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- Arai, Hitoshi Boundary behavior of functions on complete manifolds of negative curvature. **91c:53037**
- Babuška, Ivo (with Pitkäranta, J.) The plate paradox for hard and soft simple support. **91h:73059**
- Baum, Paul (with Douglas, Ronald G.; Taylor, Michael E.) Cycles and relative cycles in analytic K-homology. **91b:58244**
- Bethuel, Fabrice (with Brézis, Haim) Régularité des minima de problèmes relaxés pour les applications harmoniques. (English summary) [Regularity of minimizers of relaxed energies for harmonic maps] **91k:58023**
- Boyarkin, D. I. Smoothness of solutions of a nonelliptic boundary value problem. (Russian) (see **91h:00036**)
- Bratteli, Ola (with Robinson, Derek W.) Second-order elliptic operators and heat kernels on Lie groups. **91j:22002**
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- Derrick, W. R. see Cima, Joseph A., **91i:30013**
- Dietrich, Helmut An application of the duality theory of Toland to a problem of optimal control. **91e:49037**
- Dobrushkin, V. A. ★ Краевые задачи динамической теории упругости для клиновидных областей. (Russian) [Boundary value problems of the dynamic theory of elasticity for wedge-shaped domains] **91e:73023**
- Douglas, Ronald G. see Baum, Paul, et al., **91b:58244**
- Fefferman, Robert Some applications of Hardy spaces and BMO in harmonic analysis and partial differential equations. **91f:42019**
- Fuchs, Martin<sup>2</sup> The smoothness of the free boundary for a class of vector-valued problems. **91d:35240**
- Gao, Yang (with Zhang, You Qi) On the extremum complementary energy principles for nonlinear elastic shells. **91c:73055**
- Gashimov, S. A. Optimal control of loaded elliptic equations. (Russian) (see **91m:00015**)
- Griego, Richard J. (with Korzeniewski, Andrzej) Asymptotics for certain Wiener integrals associated with higher order differential operators. **91e:35161**
- Grisvard, P. Singular solutions of elliptic problems and applications to the exact controllability of hyperbolic problems. **91c:35035**
- Hamburger, Christoph ★ Regularity of differential forms minimizing degenerate elliptic functionals. **91d:58048**
- Haslinger, Jaroslav (with Horák, Václav) On identification of critical curves. (Russian and Czech summaries) **91d:49005**
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- Kasimov, Sh. G. Uniform convergence of an analogue of spectral expansions that correspond to elliptic pseudodifferential operators in the space  $C(M)$ . (Russian) **91e:35158**
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- Kwong, Man Kam On the Kolodner-Coffman method for the uniqueness problem of Emden-Fowler BVP. **91b:34037**
- Li, Lige (with Lloyd, M. R.) A numerical behavior of positive solutions to elliptic predator-prey systems over large regions. **91a:92008**
- Lloyd, M. R. see Li, Lige, **91a:92008**
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- Lyons, T. J. (with Zheng, Wei An) Diffusion processes with nonsmooth diffusion coefficients and their density functions. **91m:60147**
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Abbas, Medhat M. A special solution for small time values of a diffusion equation. (Arabic summary) (Not in MR)

Cai, Zhixiong (with Pavel, Nicolae H.) Generalized periodic and antiperiodic solutions for the heat equation in  $\mathbb{R}^d$ . 91j:35114

Cannon, John R. (with Pérez Esteve, Salvador) Uniqueness and stability of 3D heat sources. 91k:35101

Chernyatin, V. A. On the sharpening of an existence theorem for a solution of a mixed problem for an inhomogeneous heat equation. (Russian) (see 91k:65008)

Gherbi, Fathi Bases d'ouverts réguliers et formule de Poisson pour l'équation de la chaleur. (English summary) [Bases of regular open subsets and Poisson formula for the heat equation] 91d:35090

Goldstein, Jerome A. The heat equation with a singular potential. (see 91k:35001)

Koyama, Tetsuya On some contractive properties for the heat equations. 91h:35140

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Nishio, Masaharu The Wiener criterion of regular points for the parabolic operator of order  $\alpha$ . 91b:35048

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Sadallah, Boubaker-Khaled Smoothness of the singularity for the heat equation in a polygonal domain. I. (Arabic. English summary) 91c:35110

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Alessandrini, Giovanni Matzoh ball soup: a symmetry result for the heat equation. 91d:31001

Bajpai, S. D. (with Mishra, Sadhana) An anharmonic Fourier analysis for use in problems of heat conduction and Meijer's G-function. 91m:33022

Barbu, Viorel The inverse one phase Stefan problem. 91h:35111

— (with Da Prato, Giuseppe; Zolésio, Jean-Paul) Feedback controllability of the free boundary of the one phase Stefan problem. 91j:35286

Beckers, J.-M. An anomalous nonlinear heat-conduction problem (improvement). 91g:80004

Ben Arous, Gérard Développement asymptotique du noyau de la chaleur hypoelliptique sur la diagonale. (English summary) [Asymptotic expansion of the hypoelliptic heat kernel on the diagonal] 91h:58272

van den Berg, Michiel Gaussian bounds for the Dirichlet heat kernel. 91f:58093

— (with Srisatkarajah, S.) Heat flow and Brownian motion for a region in  $\mathbb{R}^2$  with a polygonal boundary. 91i:60200

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Bossavit, A. Mixed methods for a vectorial Stefan problem. 91b:65194

Brodlit, N. K. (with Lychak, M. M.; Platova, E. L.) Mathematical description of a controllable heating process. (Russian) 91h:93086

Cannon, John R. (with Pérez Esteve, Salvador) Some stability estimates for a heat source in terms of overspecified data in the 3-D heat equation. 91c:35154

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Cherniga, R. M. (with Cherniga, N. D.) Symmetry of a class of heat equations with a logarithmic nonlinearity. (Russian) 91c:58147

Coulhon, Thierry Dimension à l'infini d'un semi-groupe analytique. (English summary) [Dimension at infinity of an analytic semigroup] 91k:47091

Ding, Diñh Ang On the backward parabolic equation: a critical survey of some current methods. (see 91k:65007)

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Davies, E. B. (with Pang, M. M. H.) Sharp heat kernel bounds for some Laplace operators. 91i:58142

Ding, Wei Yue Blow-up of solutions of heat flows for harmonic maps. 91b:58045

Fasano, A. (with Primicerio, M.; Howison, S. D.; Ockendon, J. R.) Some remarks on the regularization of supercooled one-phase Stefan problems in one dimension. 91c:35162

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Fujita, Yasuhiro Cauchy problems of fractional order and stable processes. 91h:35341

González, Roberto L. V. (with Tarzia, Domingo Alberto) Optimization of heat flux in domains with temperature constraints. 91h:35335

Gutman, Semion Identification of discontinuous parameters in flow equations. 91f:35269

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- Zolezzi, Tullio Variable structure control of semilinear evolution equations. 91h:93090

## 35Lxx Partial differential equations of hyperbolic type [see also 58G16]

## Items with secondary classifications in 35Lxx

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- Lisbon ★ Workshop on Hyperbolic Systems and Mathematical Physics. 91g:35005
- Workshop:  
Hyperbolic Systems and Mathematical Physics ★ Workshop on Hyperbolic Systems and Mathematical Physics. 91g:35005

## 35L05 Wave equation

- Abdikaimov, B. N. see Berdyshev, A. S., 91g:35154
- Abramov, Yu. Sh. Regular waveguide systems that generate two-parameter operator pencils of waveguide type. (Russian) (see 91k:00025)
- Anisimov, V. N. Resonance properties of systems described by the wave equation and that have moving boundaries. 91a:35095
- Armand, Ya. N. see Georgiev, Vladimir S., 91m:35133
- Babich, V. M. Application of complex rays to the calculation of "nongeometric" waves in the scalar case. (Russian. English summary) 91m:35131
- Bamberger, Alain (with Joly, Patrick; Roberts, Jean E.) Second-order absorbing boundary conditions for the wave equation: a solution for the corner problem. 91h:35066
- Berdyshev, A. S. (with Abdikaimov, B. N.) A problem, with deviation from the characteristic, for the wave equation. (Russian) 91g:35154
- Bombelli, Luca (with Couch, W. E.; Torrence, R. J.) Wake-free waves in one and three dimensions. 91h:35114
- Couch, W. E. see Bombelli, Luca; et al., 91h:35114
- Fabre, Caroline (with Puel, Jean-Pierre) Comportement au voisinage du bord des solutions de l'équation des ondes. (English summary) [Behavior near the boundary for solutions of the wave equation] 91g:35155
- Farhy, L. S. On the asymptotic behaviour of solutions of the exterior boundary acoustic problem outside trapping obstacles. 91m:35132
- Fink, A. M. see Smiley, Michael W., 91g:35156
- Georgiev, Vladimir S. (with Kovachev, V. Khr.) A weighted estimate of the solution to the wave equation. 91h:35115
- (with Arnaudov, Ya. N.) Inverse scattering problem for dissipative wave equation. (Portuguese summary) 91m:35133
- see also Kovachev, V. Khr., 91h:35143
- Gul, Bing Zhen A simplification of initial-boundary value problems for partial differential equations. (Chinese. English summary) (Not in MR)
- Guo, Kang Hui On the unique property of the wave equation. (Chinese summary) 91h:35188
- Ha-Duong, Tuong On the transient acoustic scattering by a flat object. 91h:35116
- Haraux, Alain A generalized internal control for the wave equation in a rectangle. 91h:35189
- Harmse, Jürgen On Lebesgue space estimates for the wave equation. 91j:35158
- Hillion, Pierre The Goursat problem for the homogeneous wave equation. 91h:35117
- Wave equation with covariant boundary conditions on a wave front. 91h:35125
- Boundary value problem for the wave equations. 91h:35142
- Ivanov, L. A. (with Kipriyanov, I. A.) M. Riesz potentials and Cauchy problems for the wave equation in the Lorentz space. (Russian) 91d:35126
- Joly, Patrick see Bamberger, Alain; et al., 91h:35066
- Kal'menov, T. Sh. (with Sadybekov, M. A.) The Dirichlet problem and nonlocal boundary value problems for the wave equation. 91c:35082
- Kaneko, Jyoichi Wave equation and isoparametric hypersurfaces. 91h:35118
- Karlsson, Anders (with Kristensson, Gerhard) Wave splitting in the time domain for a radially symmetric geometry. 91f:35154
- Kipriyanov, I. A. see Ivanov, L. A., 91d:35126
- Kirpichnikova, N. Ya. The behavior near a caustic of a nonstationary wave field with a singularity (of homogeneous generalized function type) on the initial front. (Russian. English summary) 91m:35134
- Kovachev, V. Khr. (with Georgiev, Vladimir S.) Weighted decay estimate for the wave equation. 91h:35143
- see also Georgiev, Vladimir S., 91h:35115
- Kreith, Kurt Establishing hyperbolic Green's functions via Leibniz's rule. (Not in MR)
- Kristensson, Gerhard see Karlsson, Anders, 91f:35154
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- Puel, Jean-Pierre see Fabre, Caroline, 91g:35155
- Rabinovich, V. S. On the solvability of problems of acoustics of open waveguides. (Russian) 91j:35159
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- Soga, Hideo Asymptotic solutions of the elastic wave equation and reflected waves near boundaries. 91h:35144

- Thakéev, D. L. On the existence of a solution to a mixed problem for a vector wave equation in a domain with a corner. (Russian) **91c:35083**
- Torrence, R. J. Selfadjoint acoustic equations with progressing wave solutions. **91g:35157** — see also Bombelli, Luca; et al., **91i:35114**
- Werner, Peter Zero resonances in local perturbations of parallel-plane waveguides. **91j:35160**
- Weston, Vaughan H. Wave splitting and the reflection operator for the wave equation in  $\mathbb{R}^3$ . **91c:35084**
- Yamamoto, Kazuhiro Exponential energy decay of solutions of elastic wave equations with the Dirichlet condition. **91f:35155**
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- Amirat, Youcef (with Hamdache, Kamel; Ziani, Abdelhamid) Homogénéisation par décomposition en fréquences d'une équation de transport dans  $\mathbb{R}^n$ . (English summary) [Homogenization by decomposition into frequencies of a transport equation in  $\mathbb{R}^n$ ] **91j:35032**
- Artyushin, A. N. Variational inequalities for the wave equation with a constraint on the solution. **91i:35131**
- Baer, A. V. On the solution of an inverse problem for the wave equation from information given at a point. **91i:35199**
- Uniqueness of a solution of an inverse problem for an equation in acoustics, and an inverse spectral problem. (Russian) **91h:35320**
- Bagrov, V. G. (with Samsonov, B. F.; Shapovalov, A. V.; Shirokov, I. V.) Commutative subalgebras of three first-order symmetry operators and separation of variables in the wave equation. **91h:35019**
- Bennish, Joseph Mixed initial-boundary value problems for hyperbolic equations with constant coefficients. **91m:35056**
- Borovikov, I. P. (with Gaponenko, Yu. L.) An inverse problem for the wave equation with an unknown source of perturbations. **91i:35200**
- Cardoso, Fernando (with Petkov, Vesselin M.) Leading singularity of the scattering kernel for moving obstacles with dissipative boundary conditions. (Italian summary) **91j:35209**
- Chen, Goong (with Fulling, Stephen A.; Narcowich, Francis J.; Sun, Shun Hua) Exponential decay of energy of evolution equations with locally distributed damping. **91k:35037**
- Chen, Xiao Hong see Guo, Bao Qi; et al., **91c:35155**
- Cioranescu, Dolina (with Donato, Patrizia; Zuazua, Enrique) Contrôlabilité exacte frontière de l'équation des ondes dans des domaines avec des petits trous. (English summary) [Exact boundary controllability for the wave equation in domains with small holes] **91j:35030**
- Donato, Patrizia see Cioranescu, Dolina; et al., **91j:35030**
- Fabre, Caroline Équation des ondes avec second membre singulier et application à la contrôlabilité exacte. (English summary) [Wave equation with singular second member and application to exact controllability] **91d:93008**
- Furky, L. S. On the poles of the scattering matrix for one convex and one nonconvex bodies. **91j:35211**
- Ferreira, J. Arminio (with Perla Menzala, G.) On scattering by time-dependent potentials: the 2-D case. **91f:35202**
- Fujita, Yasuhiro Cauchy problems of fractional order and stable processes. **91h:35341**
- Fulling, Stephen A. see Chen, Goong; et al., **91k:35037**
- Gabov, S. A. (with Krutitskii, P. A.) Energy characteristics of nonstationary internal waves in a vertical channel with a stratified fluid. (Russian) **91g:76099**
- Gaponenko, Yu. L. see Borovikov, I. P., **91i:35200**
- Geng, Guang see Ling, Ling, **91g:35011**
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- Gérard, Patrick (with Lebeau, Gilles) Deuxième microlocalisation et problèmes aux limites. [Second microlocalization and boundary value problems] **91k:35010**
- Glowinski, Roland (with Li, Chin Hsien; Lions, Jacques-Louis) A numerical approach to the exact boundary controllability of the wave equation. I. Dirichlet controls: description of the numerical methods. **91g:35043a**
- (with Li, Chin Hsien; Lions, Jacques-Louis) Errata: "A numerical approach to the exact boundary controllability of the wave equation. I. Dirichlet controls: description of the numerical methods". **91g:35043b**
- Guo, Bao Qi (with Chen, Xiao Hong; Yang, Shan Shan) An inverse problem for the one-dimensional sound speed problem for the wave equation. (Chinese. English summary) **91c:35155**
- An inverse problem for determining the unknown coefficient in the wave equation. (Chinese. English summary) **91i:35202**
- Hamdache, Kamel see Amirat, Youcef; et al., **91j:35032**
- Ho, Lap Fat Exact controllability of the one-dimensional wave equation with locally distributed control. **91h:93014**
- Hunter, John K. Nonlinear geometrical optics. **91k:76137**
- Ikawa, Mitsuru On poles of scattering matrices for several convex bodies. **91j:35212**
- Karpenko, D. Ya. The Cauchy problem in relativistic quantum theory (generalization of the Riemann method). (Russian) **91a:81068**
- Kawashita, Mishi (with Soga, Hideo) Mode-conversion of the scattering kernel for the elastic wave equation. **91j:35213**
- Kenig, Carlos E. Progress on two problems posed by Riviere. (see **91e:00023**)
- Komerik, Vilmos Stabilisation frontière rapide de l'équation des ondes. (English summary) [Rapid boundary stabilization of the wave equation] **91d:93062**
- Kovalyov, Mikhail Decay estimates for the solutions of the non-Euclidean wave-equations. **91c:58136**
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- Landis, E. E. Light elements in space-time that pass through a hypersurface in a configuration space. (Russian) **91h:58022**
- Laptev, A. (with Safarov, Yu. G.) Global solution of the wave equation. **91j:58161**
- Lasiecka, Irena (with Stahel, Andreas) The wave equation with semilinear Neumann boundary conditions. **91k:35166**
- Lebeau, Gilles Contrôle et stabilisation hyperboliques. [Hyperbolic control and stabilization] **91j:35028**
- see also Gérard, Patrick, **91k:35010**
- Li, Chin Hsien see Glowinski, Roland; et al., **91g:35043a** and **91g:35043b**
- Li, Jian Hua<sup>1</sup> see Xie, Gan Quan, **91c:76101**
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- Petkov, Vesselin M. ★ Scattering theory for hyperbolic operators. **91e:35170**
- (with Georgiev, Vladimir S.) RAGE theorem for power bounded operators and decay of local energy for moving obstacles. (French summary) **91h:35245**
- (with Stoyanov, Luchezar N.) Singularities of the scattering kernel for a class of star-shaped nonconvex obstacles. (Portuguese summary) **91f:35203**
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- Rammaha, M. A. On the quenching of solutions of the wave equation with a nonlinear boundary condition. **91g:35025**
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- Rubin, B. S. Correction to: "Multiplier operators connected with the Cauchy problem for the wave equation. Difference regularization". **91h:35024b**
- Multiplier operators connected with the Cauchy problem for the wave equation. Difference regularization. **91h:35024a**
- Safarov, Yu. G. see Laptev, A., **91j:58161**
- Saltanov, N. V. Analogues of generalized hydrodynamic potentials in the theory of the Helmholtz vector equation and the vector wave equation. (Russian) **91h:35091**
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- Shibata, Yoshihiro (with Soga, Hideo) Scattering theory for the elastic wave equation. **91j:35204**
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- Inverse scattering problem for the wave equation with time-dependent potential. **91h:35086**
- A uniqueness result for the inverse back-scattering problem. **91k:35209**
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- Varlamov, V. V. On the propagation of nonstationary acoustic waves in a relaxing medium. **91h:76093**
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- Witsch, Karl J. Examples of embedded eigenvalues for the Dirichlet Laplacian in perturbed waveguides. **91i:35136**
- Xie, Gan Quan (with Li, Jian Hua<sup>1</sup>) Nonlinear integral equation of coefficient inversion of acoustic wave equation and iteration. **91c:76101**
- Yamamoto, Kazuhiro The behaviour of scattered plane waves of elastic wave equations and applications to scattering theory. **91k:35190**
- Yang, Shan Hua see Guo, Bao Qi; et al., **91c:35155**
- Zallpaev, V. V. Asymptotic behavior of excitation coefficients of planar waves in a problem with a sinusoidal periodic boundary. (Russian. English summary) **91m:35184**
- (with Popov, M. M.) Wood's anomalies in a problem of the diffraction of a planar wave by a smooth periodic boundary. (Russian. English summary) **91m:35185**
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- Zubov, V. I. Wave theory. (Russian) (see **91k:00010**)
- The wave equation for an anisotropic medium. **91c:35200**

### 35L10 General theory of second-order, hyperbolic equations

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- Cheney, Margaret Stability analysis of the Yagla-Levy multidimensional inverse scattering algorithm. **91g:35158**

- Colombini, Ferruccio (with Jannelli, Enrico; Spagnolo, Sergio) Nonuniqueness examples for second order hyperbolic equations. (see 91m:35003)
- Ersoy, Nuri (with Çelebi, A. Okay) On a class of hyperbolic differential equations. 91k:35146
- Ivanov, L. A. see Kipriyanov, I. A., 91g:35159
- Jannelli, Enrico see Colombini, Ferruccio; et al., (91m:35003)
- Kipriyanov, I. A. (with Ivanov, L. A.) The d'Alembert representation and the equipartition of energy. 91g:35159
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- Pfägel, J. Additionsformeln für Riemannfunktionen und Bergmanerzeugende. (English summary) [Addition formulas for Riemann functions and Bergman generators] 91d:35127
- Radzhabov, N. R. On the theory of a class of linear hyperbolic equations with two supersingular lines. (Russian. Tajiki summary) 91h:35190
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- Bubnov, B. A. New formulations of multidimensional inverse problems for hyperbolic equations in classes of functions of finite smoothness. (Russian) (see 91g:35004)
- Cai, Shang Wu Local solvability of second-order transverse hyperbolic left invariant LPDO on Heisenberg groups. (Chinese) (Not in MR)
- Gastaldi, Fabio (with Quarteroni, Alfio) On the coupling of hyperbolic and parabolic systems: analytical and numerical approach. 91h:35037
- Hillion, Pierre The Goursat problem for Maxwell's equations. 91j:35263
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- Kapustin, N. Yu. Solvability in the class  $L_2$  of the characteristic problem for a hyperbolic equation with degeneration of order. 91k:35174
- Li, Zhu Jia Three-curve theorems and estimates for solutions to parabolic and hyperbolic differential inequalities. (Chinese) 91g:35243
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- Quarteroni, Alfio see Gastaldi, Fabio, 91h:35037
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- Sablitz, K. B. Construction in explicit form of solutions of the Darboux problems for the telegraph equation and its application in the inversion of integral equations. I. 91h:35226
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- Triggiani, Roberto Exact controllability in the presence of damping. 91d:35028
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- Urzhumova, D. S. Control of the coefficient multiplying the highest derivative in the Goursat problem. (Russian) 91f:35045

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- Lazarenko, L. A. see Volkodavov, V. F., (91b:00036)
- Skwierczyński, Jacek Dual variational formulation for a hyperbolic problem. 91j:35161
- Spitsyn, V. L. The Cauchy problem for a system of second-order equations of hyperbolic type. (Russian) (see 91g:00034)
- Volkodavov, V. F. (with Lazarenko, L. A.) The Goursat problem in a conic layer for an equation of hyperbolic type. (Russian) (see 91k:00036)

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- Baltag, Yu. I. (with Perzhan, A. V.) Boundedness of the resolvent operator of the Cauchy problem for a one-dimensional hyperbolic equation in  $L_p$ . (Russian) 91j:35195
- Denisov, V. N. Stabilization of a solution of the Cauchy problem for parabolic and hyperbolic equations. 91e:35027
- Stabilization of means of solutions of the Cauchy problem for hyperbolic and parabolic equations. (Russian) 91m:35025
- Eckhaus, W. (with Garbey, Marc) Asymptotic analysis on large timescales for singular perturbations of hyperbolic type. 91f:35067
- Garbey, Marc see Eckhaus, W., 91f:35067
- Lavrenyak, S. P. A Cauchy problem for an equation of the type of oscillation of a plate with nonnegative characteristic form. (Ukrainian. Russian summary) (Not in MR)
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- Shinkai, Kenzo (with Taniguchi, Kazuo) On ultra wave front sets and Fourier integral operators of infinite order. 91j:35297
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- Baranovskaya, S. N. Classical solution of a mixed problem for equations with a one-

- dimensional wave operator. (Russian. English summary) 91k:35147
- Bogmér, A. A string equation with special boundary conditions. 91a:35097
- Cannarsa, Piermarco (with Da Prato, Giuseppe; Zolésio, Jean-Paul) The damped wave equation in a moving domain. 91f:35157
- Chernyatin, V. A. Solvability of a mixed problem for hyperbolic equations in the limit case. (Russian) (see 91k:00023)
- Da Prato, Giuseppe see Cannarsa, Piermarco; et al., 91f:35157
- Haws, LaDawn Symmetric Green's functions for certain hyperbolic problems. 91k:35148
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- Ling, Ling Properties of solutions to ultrahyperbolic equations and the Dirichlet problem. (Chinese) 91j:35162
- Morgenröther, K. (with Werner, Peter) On the instability of resonances in parallel-plane waveguides under local perturbations of the boundary. 91d:35128
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- Sikorav, Jacques A linear wave equation in a time-dependent domain. 91k:35149
- Tang, Xian Jiang Mixed problems for second-order hyperbolic equations with singular oblique derivatives. (Chinese) 91m:35136
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- Zhamalov, R. S. Mixed problems for evolution systems with a second-order boundary condition. (Russian) (see 91g:35004)
- Zhelezovskii, S. E. (with Kirichenko, V. F.; Krysko, V. A.) Symmetrization of a hyperbolic equation. 91h:35191
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- Items with secondary classifications in 35L20
- Bennish, Joseph Mixed initial-boundary value problems for hyperbolic equations with constant coefficients. 91m:35056
- Chen, Goong (with Fulling, Stephen A.; Narcowich, Francis J.; Qi, Chao) An asymptotic average decay rate for the wave equation with variable coefficient viscous damping. 91j:35205
- Dumanyan, V. Zh. Uniform quasi-asymptotic behavior of solutions of hyperbolic equations. 91j:35046
- Engquist, B. (with Halpern, Laurence) Long-time behaviour of absorbing boundary conditions. 91m:35045
- Fulling, Stephen A. see Chen, Goong; et al., 91j:35205
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- Kim, Wan Se Double-periodic boundary value problem for nonlinear dissipative hyperbolic equations. 91a:35018
- Kreith, Kurt Establishing hyperbolic Green's functions via Leibniz's rule. (Not in MR)
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- Nguyễn Mạnh Hùng On the smoothness of solution of the mixed boundary value problem for the second order hyperbolic equation in a neighbourhood of an edge. 91j:35060
- Pastukhova, S. E. On the continuation of microlocal smoothness of solutions of boundary value problems for a second-order hyperbolic equation. 91k:35048
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- Slemrod, M. The relaxed invariance principle and weakly dissipative infinite-dimensional dynamical systems. 91h:35059
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- Walkington, Noel J. see Showalter, Ralph E., (91g:00044)
- Xu, Chao Jiang Propagation au bord des singularités pour des problèmes de Dirichlet non linéaires d'ordre deux. [Boundary propagation of singularities for nonlinear second-order Dirichlet problems] 91f:35012
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- Fitzgibbon, William E. Limiting behavior of the strongly damped extensible beam equation. **91g:35050**

### 35L80 Hyperbolic PDE of degenerate type

- Aldashev, S. A.** A mean value theorem and nonlocal boundary value problems for multidimensional equations with simultaneous degeneration of type and order. (Russian. Uzbek summary) **91j:35184**
- Deryabina, A. V.** Growing solutions of strongly degenerate hyperbolic systems. **91h:35220**
- Egorov, I. E.** On the theory of second-order degenerate hyperbolic equations. **91e:35136**
- Gagneux, Gérard** (with Madaune-Tort, Monique) Évaluation du temps de percée et influence de la capillarité sur un modèle simplifié de la récupération secondaire en ingénierie pétrolière. (English summary) [Estimate of the break-through time for a simplified model of the secondary recovery from oil fields and influence of the capillarity effects] **91k:35173**
- Holden, Lars** On the strict hyperbolicity of the Buckley-Leverett equations for three-phase flow in a porous medium. **91c:35098**
- Isomov, B.** (with Kasimov, Kh. N.) Some boundary value problems with shift for an equation of hyperbolic type with two lines of degeneracy. (Russian) (Not in MR)
- Kapestin, N. Ya.** Solvability in the class  $L_2$  of a problem with a boundary condition on a characteristic for a hyperbolic equation with order degeneration. **91b:35077**
- Solvability in the class  $L_2$  of the characteristic problem for a hyperbolic equation with degeneration of order. **91k:35174**
- Kasimov, Kh. N.** See Isomov, B. (Not in MR)
- Kharibegashvili, S. S.** A characteristic problem for a class of second-order hyperbolic systems with degeneration of type and order. (Russian. English and Georgian summaries) **91g:35182**
- A characterization problem for a class of second-order hyperbolic systems with a characteristic line of degeneration. **91b:35078**
- Kokina, N. O.** See Volkodavov, V. F., (91h:34004)
- Lavrenyuk, S. P.** A problem without initial conditions for an equation of the type of oscillation of a plate. (Russian. English summary) **91f:35179**
- The Cauchy problem for a degenerate equation of plate oscillation type. (Russian) **91f:35180**
- Madaune-Tort, Monique** See Gagneux, Gérard, **91k:35173**
- Nakao, Mitsuhiro** Global existence of classical solutions to the initial-boundary value problem of the semilinear wave equations with a degenerate dissipative term. **91h:35221**
- Nazarov, S. Ya.** Some nonlocal boundary value problems for the Euler-Darboux equation. (Russian. English and Armenian summaries) **91k:35175**
- Nishihara, Kenji** (with Yamada, Yoshio) On global solutions of some degenerate quasilinear hyperbolic equations with dissipative terms. **91f:35181**
- Popivanov, Nedyu** Smoothness of the solutions of some boundary value problems. (Russian. English summary) **91e:35137**
- Saifanbekov, N. T.** Boundary value problems with deviation from the characteristic for a degenerate hyperbolic equation. (Russian) **91m:35156**
- Volkodavov, V. F.** (with Kokina, N. O.) A problem for a hyperbolic equation with singular coefficients. (Russian) (see **91h:34004**)
- Yagdzhan, K. A.** The parametrix of the Cauchy problem for hyperbolic operators that are degenerate with respect to the space variables. (Russian. English and Armenian summaries) **91h:35222**
- Yamada, Yoshio** See Nishihara, Kenji, **91f:35181**
- Zhamalov, R. S.** Mixed problems for a degenerate hyperbolic equation. (Russian) (see **91k:00025**)
- Zhegalov, V. I.** The Cauchy-Goursat problem with shifts. (Russian. English summary) (see **91h:00025**)
- Items with secondary classifications in 35L80**
- Alexandrian, G.** On the Cauchy problem for a class of hyperbolic operators with singularities in the coefficients. (Serbo-Croatian summary) **91m:35135**
- Dai, Zheng De** (with Xiang, Chang He) The fundamental solution of weighted Cauchy problem for one-ordered Fuchsian type pseudodifferential operator. **91a:35177**
- Dzhuraev, Kh. Sh.** Solution of the Cauchy problem for the Euler-Poisson-Darboux equation. (Russian. Tajiki summary) **91a:35133**
- Solution of the Cauchy problem for the Euler-Poisson-Darboux (EPD) equation in the multidimensional case. (Russian. Tajiki summary) **91e:35171**
- Gabov, S. A.** (with Simakov, S. T.) Linear problems in the dynamics of a floating fluid. Existence theorems. **91f:35228**
- Gingold, H.** (with Trutzu, V.) On resonance in linear conservation laws without source terms. **91k:35202**
- Hoang Dinh Dung** Integral representations of the solution of some hyperbolic systems with degenerate coefficients and their applications. **91b:35067**
- Isomov, B.** A three-dimensional problem for an equation of mixed parabolic-hyperbolic type. (Russian) **91a:35123**
- Jannelli, Enrico** On the symmetrization of the principal symbol of hyperbolic equations. **91g:35163**
- Popivanov, Nedyu** Nonlocal regularization of some overdetermined boundary value problems. **91a:35126**
- Sattarov, A. S.** Solution of a Cauchy-type problem for a fourth-order degenerate equation with one singular line. (Russian. Tajiki summary) **91m:35163a**
- Solution of a Cauchy-type problem for a fourth-order degenerate equation with two singular lines. (Russian. Tajiki summary) **91m:35163b**
- Serre, Denis** Systèmes d'EDO invariants sous l'action de systèmes hyperboliques d'EDP. (English summary) [ODE systems invariant under the action of hyperbolic PDE systems] **91k:34050**
- Simakov, S. T.** See Gabov, S. A., **91f:35228**
- Trutzu, V.** See Gingold, H., **91k:35202**
- Xiang, Chang He** See Dai, Zheng De, **91a:35177**
- Xiao, Ling** Degenerate quasilinear hyperbolic systems—conservation laws. (see **91g:00044**)

### 35L85 Unilateral problems; variational inequalities for hyperbolic PDE [see also 35R35, 49J40]

- Artyushin, A. N.** Variational inequalities for the wave equation with a constraint on the

solution. **91e:35131**

- Kim, Jong Uhn** A boundary thin obstacle problem for a wave equation. **91a:35121**
- A one-dimensional dynamic contact problem in linear viscoelasticity. **91f:35182**
- Kuks, L. M.** The sign-definiteness of solutions of higher-order singular hyperbolic inequalities. (see **91h:34001**)
- Shi, Peter** Equivalence of variational inequalities with Wiener-Hopf equations. **91g:35183**
- Sim, Dong Un** The stability of the nonlinear hyperbolic three-layer difference variational inequalities. (Korean. English summary) **91d:35145**
- Items with secondary classifications in 35L85**
- Amerio, Luigi** On the elastic impact of two vibrating strings with different characteristic velocities: study of a free-boundary unilateral problem. (Italian summary) **91e:73028**
- Arnol'd, V. I.** On the interior scattering of waves, defined by hyperbolic variational principles. **91d:58245**
- Citrini, Claudio** (with Marchionna, Clelia) On the motion of a string vibrating against a gluing obstacle. (Italian summary) **91c:73036**
- Marchionna, Clelia** See Citrini, Claudio, **91c:73036**

### 35L99 None of the above, but in this section

- Amiror, R. Kh.** Uniqueness of the solution of the Cauchy problem for an ultrahyperbolic equation. (Not in MR)
- Bernardi, Enrico** (with Bove, Antonio) Necessary and sufficient conditions for the well-posedness of the Cauchy problem for a class of hyperbolic operators with triple characteristics. **91e:35138**
- Bove, Antonio** See Bernardi, Enrico, **91e:35138**
- Brokate, Martin** (with Sprekels, Jürgen) Existence and optimal control of mechanical processes with hysteresis in viscous solids. **91c:35099**
- Jiang, Tao** A variable iteration method for a class of Cauchy problems for evolution equations. (Chinese. English summary) (Not in MR)
- Kajitani, Kunihiko** See Wakabayashi, Seichiro, **91g:35184**
- Ling, Ling** Some problems in the qualitative study of ultrahyperbolic equations. (Chinese. English summary) **91e:35139**
- Liu, Ya Cheng** Global strong solutions for a class of nonlinear multidimensional pseudohyperbolic equations. II. Initial value problems. (Chinese. English summary) **91m:35157**
- Sprekels, Jürgen** See Brokate, Martin, **91c:35099**
- Ulnukazarov, M. Zh.** Basis systems of polynomial solutions of equations with generalized ultrahyperbolic operators. (Russian) (Not in MR)
- Wakabayashi, Seichiro** (with Kajitani, Kunihiko) Hyperbolic operators in Gevrey classes. **91g:35184**
- Items with secondary classifications in 35L99**
- Abergel, Frédéric** (with Temam, Roger) Duality methods for the boundary control of some evolution equations. **91h:49046**
- Dawidowicz, Antoni Lech** On the Avez measure for hyperbolic equation. **91d:58132**
- Grisvard, P.** An estimate for the accuracy of an efficient factorized difference scheme for hyperbolic equations with a small parameter multiplying the highest time derivative. (Russian. Tajiki summary) **91d:65135**
- Evaev, I. D.** Nonconformal finite elements for a hyperbolic equation with a long memory. (Russian) **91h:65145**
- Go, Shun'ichi** Singular limit of the incompressible ideal magneto-fluid motion with respect to the Alfvén number. **91d:76084**
- Grisvard, P.** Singular solutions of elliptic problems and applications to the exact controllability of hyperbolic problems. **91c:35035**
- Kaneko, Akira** See Lee, Eun Gu, **91d:35045**
- Kim, Dohan** See Lee, Eun Gu, **91d:35002**
- Kranyš, M.** Causal theories of evolution and wave propagation in mathematical physics. **91c:73016**
- Lascar, Bernard** Propagation des singularités Gevrey pour des équations effectivement hyperboliques. (English summary) [Propagation of Gevrey singularities for effectively hyperbolic equations] **91m:35011**
- Lee, Eun Gu** (with Kim, Dohan) The extension of solutions for the Cauchy problem in the complex domain. **91k:35002**
- (with Kaneko, Akira) Condition of partial hyperbolicity modulo a linear subvariety for operators with constant coefficients. **91d:35045**
- Oura, N.** (with Triggiani, Roberto) Uniform stabilization of the Euler-Bernoulli equation with feedback operator only in the Neumann boundary condition. **91k:35029**
- Perevmut, M. A.** The hyperbolic equation method in  $L^p$ -spaces. **91a:47067**
- Temam, Roger** See Abergel, Frédéric, **91h:49046**
- Triggiani, Roberto** See Oura, N., **91k:35029**

### 35Mxx Partial differential equations of special type (mixed, composite, etc.) {For degenerate types, see 35J70, 35K65, 35L80.}

- Malovichko, V. A.** Boundary value problems for systems of equations of mixed and composite types. **91d:35146**

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- Joseph, Daniel D.** ★ Fluid dynamics of viscoelastic liquids. **91d:76003**

### 35M05 Equations and systems of mixed (Tricomi, etc.) or composite type (1985) {For degenerate types, elliptic, see 35Jxx, parabolic, see 35Kxx, hyperbolic, see 35Lxx, etc.}

- Astaeva, L. K.** A nonlinear boundary value problem with shift and free boundaries for the

- Lavrent'ev-Bitsadze equation. (Russian) (see 91b:00025)  
 Khairullin, R. S. The Tricomi problem for a special case of an equation of the second kind. (Russian) (see 91b:00025)  
 Shagidullin, N. M. A nonlocal analogue of the Gellerstedt problem. (Russian) (see 91b:00025)

Items with secondary classifications in 35M05

- Zhegalov, V. I. The Cauchy-Goursat problem with shifts. (Russian. English summary) (see 91b:00025)

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- Abdinazarov, S. On a third-order equation. (Russian) 91c:35140  
 — see also Dzuraev, T. D., 91c:35141  
 Abdurakhmanov, M. A. A priori estimates for an initial-boundary value problem for a system with a mixed parabolic-elliptic structure in  $W_p^j$ -classes. (Russian. Kazakh summary) 91c:35100  
 — A priori  $L_2$ -estimates for the solution of an initial-boundary value problem for a system of two equations of general type that has a mixed parabolic-elliptic structure. (Russian) 91j:35185  
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 — Some nonlocal boundary value problems for a parabolic-hyperbolic equation with a characteristic line of change of type. 91m:35158  
 — Nonlocal boundary value problems for an elliptic-parabolic equation. 91g:35185  
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 Chekmarev, T. V. The Tricomi problem for a model system of equations in domains of special forms. 91c:35142  
 Chen, Senhui E. (with Kellogg, R. Bruce) An interior discontinuity of a nonlinear elliptic-hyperbolic system. 91j:35187  
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 — A nonlinear control problem for an equation of mixed type of the second kind. (Russian) 91j:35188  
 Drzhokhadze, O. M. Some variants of the Frankl' problem for the Lavrent'ev-Bitsadze equation in a half-plane. (Russian) 91b:35079  
 Dzuraev, T. D. (with Abdinazarov, S.) On a theory of equations with multiple characteristics. (Russian) 91c:35141  
 — (with Apakov, Yu. P.) The Gellerstedt problem for a parabolic-hyperbolic equation in a three-dimensional space. 91c:35143  
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 Egorov, I. E. On the boundary value problem  $E$  for a class of elliptic-parabolic equations. (Russian) (see 91g:35004)  
 Gagneux, Gérard (with Guerfi, F.) Approximations de la fonction de Heaviside et résultats d'unicité pour une classe de problèmes quasilineaires elliptiques-paraboliques. (English summary) [Approximations of the Heaviside function and uniqueness results for a class of quasilinear elliptic-parabolic problems] 91f:35184  
 Guerfi, F. see Gagneux, Gérard, 91f:35184  
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 Isomov, B. Analogues of the Tricomi problem for equations of mixed type with two lines and different order of degeneration. (Russian) 91c:35144  
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 Kapustin, N. Yu. Unique solvability in the class  $L_2$  of the Tricomi problem for a parabolic-hyperbolic equation with lowest terms. 91j:35190  
 — (with Sabitov, K. B.) The Riccati equation in the theory of equations of mixed type. 91m:35159  
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 Larkin, N. A. (with Schneider, Manfred Friedrich) A stabilization method for the Tricomi problem. (German and Russian summaries) 91c:35148  
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 — A boundary value problem with M. Saigo and Riemann-Liouville operators for a moisture-transfer equation. (Russian) 91c:35149  
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 Sun, Guang Cheng (with Min, Chang Tai) Problems of existence and uniqueness of solutions to inhomogeneous third-order parabolic-hyperbolic equations. (Chinese) 91a:35124  
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 Zully, Claude Existence et régularité de solutions d'équations de Monge-Ampère changeant de type. [Existence and regularity of solutions of Monge-Ampère equations that change type] 91j:35191

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- Abdel Karim, A. A. Eigenvalues of a nonselfadjoint operator of parabolic-hyperbolic type. (Russian) 91d:35158  
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 Dzuraev, T. D. (with Talipov, A.) A boundary value problem for a third-order degenerate equation containing a parabolic operator. (Russian. Uzbek summary) 91g:35126  
 Egorov, I. E. A boundary value problem for a higher-order equation with changing time direction. 91h:35064  
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- Guseinov, A. M. *see* Tagiev, F. A., 91h:65211
- Holden, Helge (with Holden, Lars; Risebro, N. H.) Some qualitative properties of  $2 \times 2$  systems of conservation laws of mixed type. 91f:35166
- Holden, Lars On the strict hyperbolicity of the Buckley-Leverett equations for three-phase flow in a porous medium. 91c:35098
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- Kemochi, Nobuyuki (with Kubo, Masahiro) Periodic behaviour of solutions to a parabolic-elliptic problem. 91d:35020
- (with Kröner, Dietmar; Kubo, Masahiro) Periodic solutions to porous media equations of parabolic-elliptic type. 91g:35028
- Keyfitz, Barbara Lee A criterion for certain wave structures in systems that change type. 91c:35092
- Shocks near the sonic line: a comparison between steady and unsteady models for change of type. 91j:76040
- The use of vectorfield dynamics in formulating admissibility conditions for shocks in conservation laws that change type. 91f:35168
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- Melikulov, A. S. Solvability conditions for a class of boundary value problems with a free boundary. (Russian. Uzbek summary) 91e:35226
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- Saikaubekov, N. T. Boundary value problems with deviation from the characteristic for a degenerate hyperbolic equation. (Russian) 91m:35156
- Samokhin, V. N. Averaging of a system of Prandtl equations. 91e:35037
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- Admissibility criteria and admissible weak solutions of Riemann problems for conservation laws of mixed type: a summary. (see 91e:35004)
- Uniqueness of admissible solutions of the Riemann problem for a system of conservation laws of mixed type. 91g:35173
- (with de Mottoni, Piero) Existence and uniqueness of the Riemann problem for a nonlinear system of conservation laws of mixed type. 91h:35074
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### 35M20 PDE of composite type

- Bogan, Yu. A. An estimate of Saint-Venant type for an equation of composite type. (Russian) 91j:35192
- Boimakov, K. Kh. Multidimensional systems of differential equations of composite type with nonsmooth coefficients. 91m:35165
- Cook, L. Pamela (with Schleinger, G.; Weinacht, Richard J.) Composite type, change of type, and degeneracy in first order systems with applications to viscoelastic flows. 91f:35188
- Kozlov, A. A boundary value problem with cyclic shift for a system of first-order equations of composite type with two double real characteristics. (Russian. Tajiki summary) 91k:35180
- Malovichko, V. A. A boundary value problem for a system of third-order equations of composite type. (Russian) 91k:35181
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### 35Q05 Euler-Poisson-Darboux equation and generalizations

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- Solution of the Cauchy problem for the Euler-Poisson-Darboux (EPD) equation in the multidimensional case. (Russian. Tajiki summary) **91e:35171**
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- Perthame, Benoît Nonexistence of global solutions to Euler-Poisson equations for repulsive forces. **91e:35173**
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- Chern, Shuh Jye (with Marsden, Jerrold E.) A note on symmetry and stability for fluid flows. **91d:76013**
- Kaptsov, O. V. New solutions of two-dimensional steady Euler equations. **91h:76020**
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### 35Q10 Navier-Stokes equations [see also 76D05] (1985)

- Aliiev, I. V. Comparison of the results of a numerical and an approximate-analytic solution of the Navier-Stokes equation. (Russian) (see **91e:00018**)

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- Belyaev, N. M. (with Kashimirov, V. V.) Nonstationary solutions of the Navier-Stokes equations for laminar flows. (Russian) (see **91h:00029**)
- Kashimirov, V. V. see Belyaev, N. M., (91h:00029)
- Liu, Ying Xi (with Shang, Xuan Yu) Analysis of the two-dimensional Navier-Stokes problem by a penalty quasiconforming element technique. (Chinese. English summary) (Not in MR)
- Shang, Xuan Yu see Liu, Ying Xi, (Not in MR)

### 35Q15 Riemann-Hilbert problems [see also 30E25, 31A25, 31B20]

- Fokas, A. S. (with Manakov, S. V.) The dressing method, symmetries, and invariant solutions. **91k:35194**
- Huang, Lie De Some new advances in the Riemann-Hilbert problem. (Chinese. English summary) **91h:35249**
- Manakov, S. V. see Fokas, A. S., **91k:35194**

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- Cheng, Jin<sup>2</sup> Riemann-Hilbert boundary value problems with negative indices for first-order overdetermined systems on bicylindrical domains. (Chinese) **91f:35191**
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- Trangenstein, John A. (with Pember, Richard B.) The Riemann problem for longitudinal motion in an elastic-plastic bar. **91h:73027**

### 35Q20 Particular equations of mathematical physics (Korteweg-de Vries, Burgers, etc.) (1985)

- Kosevich, A. M. Particle and wave properties of solitons. Resonant and nonresonant soliton scattering by impurities. (Not in MR)
- Matsumoto, Yoshimasa Linearization of a novel nonlinear integro-differential evolution equation and its exact solutions. (Not in MR)
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- Shuf'ga, M. V. Approximate scale symmetry of a nonlinear Schrödinger equation. (Russian) (see **91e:00008**)

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- Christiansen, Peter L. see Muto, V.; et al., (91h:92001)

- Halding, J. *see* Muto, V.; et al., (91b:92001)
- Hunter, John K. Numerical solutions of some nonlinear dispersive wave equations. (see 91e:65005)
- Ignaczak, József Errata: "Solitons in a nonlinear rigid heat conductor" [J. Thermal Stresses 12 (1989), no. 3, 403-423; MR 90g:80008]. (Not in MR)
- Kielhöfer, Hansjörg A bifurcation theorem for potential operators and an application to wave equations. (see 91b:00048)
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- Wei, Rong Jue *see* Wang, Ben Ren, (Not in MR)
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- Ge, Mo Lin see Wang, Jun Yi, 91d:83056
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- Malyszko, E. On the interactions of Riemann waves in relativistic magnetohydrodynamics. (Russian and Polish summaries) 91k:76155
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## 35Q80 Applications of PDE in areas other than physics

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- Manganaro, N. see Fusco, D., 91f:35265
- Shen, Wei Xi. Threshold phenomena for the first initial-boundary value problem of the FitzHugh-Nagumo equations. 91c:35148
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- Carpenter, Gail A. Some cell-biological mechanisms governing complex neural signal patterns. 91k:92010
- Chen, Ren Zhao (with Gao, Hang). Lyapunov's stability for time-varying population systems. 91h:92022
- Chen, Zhi Xiong see Guo, Ben Yu, 91m:35107
- Engelbrecht, Jüri K. On mathematical models for nerve-pulse transmission. 91h:92012
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- Hereman, Willy. Application of a Macsyma program for the Painlevé test to the FitzHugh-Nagumo equation. (see 91c:58004)
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- Kanev, Ya. I. The existence of a solution of traveling wave type for the Belousov-Zhabotinskii system of equations. 91c:35116
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- Lange, Charles G. (with Weinitschke, Hubertus J.). Singular perturbations of limit points with application to tubular chemical reactors. 91k:35029
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- Wang, Shou Hong (with Huang, Jian Ping; Chou, Ji Fan) Some properties of the solutions of the large-scale equations of atmosphere—nonlinear adjustment process by exterior steady sources. **91j:86002**
- Wang, Tankin *see* Ting, Thomas C. T., **91k:73051**
- Wunderlin, A. *see* Bestehorn, M.; et al., **91b:58169**
- Xie, Fei Peng *see* Lin, Long Wei, **91b:56160**
- Xu, Yong Zhi *see* Gilbert, Robert P., **91a:76080**
- Yang, Yitong Blow-up of the SU(2, C) Yang-Mills fields. **91h:58112**
- Zalik, R. A. On the nonlinear Jeffcott equations. (see **91g:00046**)
- Zhu, Zhi (with Sun, Ju Jiang) Stability of a reaction-diffusion system of equations for a class of competitor-competition-mutualist models. (Chinese. English summary) **91i:35105**
- Zolésio, Jean-Paul *see* Cannarsa, Piermarco; et al., **91f:35157**

### 35Rxx Miscellaneous topics involving partial differential equations {For equations on manifolds, see 58Gxx; for manifolds of solutions, see 58Bxx; for stochastic PDEs, see also 60H15.}

#### 35R05 PDE with discontinuous coefficients or data

- Ambrosetti, Antonio (with Calahorra, Marco; Dobbaro, F.) Global branching for discontinuous problems. **91m:35229**
- Arcoya, David (with Cañada, A.) The dual variational principle and discontinuous elliptic problems with strong resonance at infinity. **91m:35230**
- Calahorra, Marco *see* Ambrosetti, Antonio; et al., **91m:35229**
- Cañada, A. *see* Arcoya, David, **91m:35230**
- Dobbaro, F. *see* Ambrosetti, Antonio; et al., **91m:35229**
- Lions, Jacques-Louis Furtivité et sentinelles pour les systèmes distribués à données incomplètes. (English summary) [Stealthiness and sentinels for distributed systems with incomplete data] **91i:35195**
- Nailimov, V. L. The method of narrow strips in a boundary value problem with discontinuous boundary conditions. (Russian) **91k:35246**
- Oganyan, V. A. Solvability of the Neumann problem for elliptic systems with discontinuous boundary conditions. (Russian. English and Armenian summaries) **91g:35228**
- Orynbassarov, M. O. Existence of a solution of a boundary value problem for a system of parabolic equations with discontinuous coefficients when the boundary conditions contain higher-order derivatives. (Russian) **91m:35231**

#### Items with secondary classifications in 35R05

- Avin, Joel D. Solutions with singular initial data for a model of electrophoretic separation. **91g:35133**
- Bukashkin, V. B. (with Sushko, V. G.) Asymptotic expansion with respect to the small parameter of the solution of an equation of elliptic type with a discontinuous coefficient and right-hand side. (Russian) **91h:35079**
- Caffarelli, Luis A. Elliptic second order equations. **91h:35070**
- Carl, Siegfried The monotone iterative technique for a parabolic boundary value problem with discontinuous nonlinearity. **91g:35134**
- (with Heikkilä, Seppo) On a parabolic boundary value problem with discontinuous nonlinearity. **91k:35111**
- Chico, Maurizio On another class of elliptic equations of nonvariational type with discontinuous coefficients. (Italian. English summary) **91g:35086**
- Demengel, Françoise (with Serre, Denis) Persistance de la partie singulière dans les mesures solutions d'une équation hyperbolique scalaire. (English summary) [Nonvanishing singular parts of measure-valued solutions for scalar hyperbolic equations] **91g:35168**
- Ewing, Richard E. *see* Lin, Tao; et al., **91m:65242**
- Francheteau, Jacques Le problème de Cauchy semi-linéaire pour un opérateur différentiel strictement hyperbolique avec données initiales discontinues. (English summary) [The semilinear Cauchy problem for a strictly hyperbolic differential operator with discontinuous data, for  $m$ th order equations] **91f:35159**
- Franciosi, Michelangelo (with Fusco, Nicola)  $W^{2,p}$  regularity for the solutions of elliptic nondivergence form equations with rough coefficients. **91h:35105**
- Frigon, Marlène (with Marino, Antonio; Saccon, Claudio) Some problems of parabolic type with discontinuous nonlinearities on convex constraints. (Italian summary) **91k:35113**
- Fusco, Nicola *see* Franciosi, Michelangelo, **91h:35105**
- Gagné, A. G. Uniqueness of solutions of the Cauchy problem for a parabolic equation with increasing coefficients. (Russian. English and Georgian summaries) **91f:35127**
- Asymptotic behavior of solutions of the first initial-boundary value problem for parabolic equations with unbounded coefficients. (Russian. English and Georgian summaries) **91g:35047**
- George, John H. *see* Lin, Tao; et al., **91m:65242**
- Gmira, Abdellah On quasilinear parabolic equations involving measure data. **91k:35114**

- Heikkilä, Seppo *see* Carl, Siegfried, **91k:35111**
- Huang, Chin Liang The asymptotic behavior of solutions of parabolic differential equations with unbounded coefficients. **91h:35056**
- Kirpichnikova, N. Ya. The behavior near a caustic of a nonstationary wave field with a singularity (of homogeneous generalized function type) on the initial front. (Russian. English summary) **91m:35134**
- Kochubei, A. N. Diffusion of fractional order. **91j:35133**
- Lapushkin, S. S. Particle-like excitations in the X-Y model with external action of impulse type. **91c:82018**
- Le Floch, Philippe An existence and uniqueness result for two nonstrictly hyperbolic systems. **91g:35171**
- Li, Cheng Huan *see* Wen, Gao Chun, **91c:35102**
- Lin, Tao (with Sochacki, James S.; Ewing, Richard E.; George, John H.) Some grid refinement schemes for hyperbolic equations with piecewise constant coefficients. **91m:65242**
- Liu, Ru Xun d'Alembert formula and the direct or inverse problems for wave equation. **91h:35021**
- Marino, Antonio *see* Frigon, Marlène; et al., **91k:35113**
- Mirzoev, V. M. Solvability of the first mixed problem for a second-order parabolic equation with discontinuous coefficients. **91a:58083**
- Romanov, V. G. Questions of the well-posedness of a problem of determining the speed of sound. **91g:35239**
- Sabatier, Pierre C. On the scattering by discontinuous media. **91d:35056**
- Saccon, Claudio *see* Frigon, Marlène; et al., **91k:35113**
- Serre, Denis *see* Demengel, Françoise, **91g:35168**
- Sochacki, James S. *see* Lin, Tao; et al., **91m:65242**
- Sushko, V. G. *see* Bukashkin, V. B., **91h:35079**
- Tsujioka, Kunio On a damped wave equation with a singular boundary condition. **91k:35150**
- Wen, Gao Chun (with Li, Cheng Huan) The discontinuous Poincaré problem for elliptic second-order equations. (Chinese) **91c:35102**
- Yangalova, N. E. Unessential sets in the Cauchy problem for second-order parabolic equations. **91h:35043**
- Zhang, Wei Tao An improvement of Hörmander's lemma, and eigenvalue problems. (Chinese. English summary) **91k:35138**

#### 35R10 Partial functional-differential or differential-difference equations, with or without deviating arguments

- Augustynowicz, A. (with Kamont, Zdzisław) On Kamke's functions in uniqueness theorems for first order partial differential-functional equations. **91j:35270**
- Bassanini, Piero (with Turo, Jan) Generalized solutions to free boundary problems for hyperbolic systems of functional partial differential equations. **91h:35196**
- Berezanskii, Yu. M. (with Gekhtman, M. I.) Inverse problem of spectral analysis and nonabelian chains of nonlinear equations. **91j:35271**
- Borzymowski, Andrzej (with Sadowski, Antoni) A nonlinear boundary value problem for Mangeron's polywave equation in  $R^3$ -space. **91c:35204**
- Bykova, L. Ya. (with Marusich, A. I.) Oscillation properties of solutions of a class of parabolic equations with delay. (Russian) **91h:35105**
- Chernosiwa, T. V. Existence and uniqueness of an analytic solution for a linear partial differential equation with a linearly transformed argument. **91a:35161**
- Chueshov, I. D. On a system of equations with delay that arises in aero-elasticity. (Russian) **91k:35247**
- Domshlak, Yu. I. (with Sheikhzamanova, L. A.) Estimates for sign preservation domains in terms of solutions of a heat equation with time delay. (Russian. English and Azerbaijani summaries) **91c:35150**
- Gekhtman, M. I. *see* Berezanskii, Yu. M., **91j:35271**
- He, Meng Xing Periodic solutions and almost periodic solutions to reaction-diffusion equations with time-delay. (Chinese. English summary) **91d:35220**
- Ishikawa, Shiro (with Kikuchi, Norio) On the singularity of fundamental solutions for difference-partial differential equations of the type  $(u_n(x) - u_{n-1}(x))/h = \sum_{i=1}^d (\partial^2/\partial x_i^2) u_n(x)$  ( $n = 1, 2, \dots, N$ ,  $h = 1/N$ ) for  $x \in R^d$  ( $d$ : odd). **91g:35229**
- Jaruszewska-Walczak, Danuta Existence of solutions of first order partial differential-functional equations. (Italian summary) **91h:35318**
- (with Kamont, Zdzisław) Existence of solutions of first order partial differential-functional equations via the method of lines. **91j:35272**
- Kamont, Zdzisław *see* Augustynowicz, A., **91j:35270** and *Jaruszewska-Walczak, Danuta*, **91j:35272**
- Kikuchi, Norio (with Misawa, Masashi) Campanato type estimates for solutions of difference-elliptic partial differential equations with constant coefficients. **91g:35230**
- *see also* Ishikawa, Shiro, **91g:35229**
- Marusich, A. I. *see* Bykova, L. Ya., **91h:35105**
- Misawa, Masashi *see* Kikuchi, Norio, **91g:35230**
- Sadowski, Antoni *see* Borzymowski, Andrzej, **91c:35204**
- Sheikhzamanova, L. A. *see* Domshlak, Yu. I., **91c:35150**
- Straburzyński, Jan The multi-valued Goursat problem for functional-differential equations of hyperbolic type. **91j:35273**
- Turo, Jan Classical solutions of mixed problems for quasilinear hyperbolic systems of functional-differential equations in two independent variables. **91g:35231**
- Generalized solutions of mixed problems for quasilinear hyperbolic systems of functional partial differential equations. **91g:35232**
- Generalized solutions of mixed problems for quasilinear hyperbolic systems of functional partial differential equations in the Schauder canonical form. **91g:35234**
- A boundary value problem for hyperbolic systems of differential-functional equations. **91g:35233**
- *see also* Bassanini, Piero, **91h:35196**
- Zhogaľ, S. P. The existence, uniqueness and continuous dependence on a parameter of solutions of a stochastic model of a complex system with delay. (Russian) **91g:35235**

## Items with secondary classifications in 35R10

- Battelli, Flaviano** Mc'nikov functions and heteroclinic orbits in delay differential equations. 91h:34105
- Cannon, John R.** (with DuChateau, Paul; Steube, Ken) Unknown ingredient inverse problems and trace-type functional-differential equations. 91b:35107
- Caraballo Garrido, Tomás** Sufficient conditions of stability for stochastic partial differential equations with delay. (Spanish. English summary) 91a:60163
- Some stability results for a class of stochastic PDEs. (Spanish) (see 91j:00015)
- Ch'én, Hung I.** The existence of solutions to functional integrodifferential equations. 91m:34104
- Da Prato, Giuseppe** (with Lunardi, Alessandra) Stabilizability of integrodifferential parabolic equations. 91a:45015
- DuChateau, Paul** see Cannon, John R.; et al., 91b:35107
- Dyson, Janet** (with Vilella-Bressan, Rosanna) Propagation of solutions of a nonlinear functional-differential equation. 91m:34106
- Friedman, Avner** (with Reith, Fernando) A hyperbolic inverse problem arising in the evolution of combustion aerosol. 91d:35226
- He, Meng Xing** Reaction-diffusion equations with time delay—monotone method and the existence of bounded solutions, periodic solutions, and almost periodic solutions. (Chinese) 91m:35033
- Inoue, Atsushi** On functional-differential equations—a recommendation for analysis on function space. Congratulations to Professor Masao Kato on his seventieth birthday. (Japanese) 91h:58023
- Ito, Kazufumi** (with Kappel, Franz; Salamon, Dietmar) A variational approach to approximation of delay systems. 91m:47056
- Kappel, Franz** see Ito, Kazufumi; et al., 91m:47056
- (Kato, Masao) see Inoue, Atsushi, 91h:58023
- Kunisch, Karl** (with Mastinšek, Miklavž) Dual semigroups and structural operators for partial functional-differential equations with unbounded operators acting on the delays. 91a:34057
- Lei, Yan Song** The Hopf bifurcation for an abstract functional-differential equation and its application. 91m:35043
- Lunardi, Alessandra** see Da Prato, Giuseppe, 91a:45015
- Mastinšek, Miklavž** see Kunisch, Karl, 91a:34057
- Michalski, Marek W.** On a certain boundary-value problem for a polyvibrating equation. (Russian and Slovak summaries) 91k:45009
- Nakamura, Akira** General cylindrical soliton solutions of the Toda molecule. 91h:35277
- Naumkin, P. I.** (with Shishmar'ev, I. A.) Nonlinear nonlocal equations in wave theory. I. The Whitham equation. 91k:35208
- Nguyen Khos So'n** A unified approach to constrained approximate controllability for the heat equations and the retarded equations. 91c:93010
- Nikol'skii, E. V.** Generalized functional-invariant solutions of a second-order multidimensional scalar equation of general form. (Russian) 91d:35044
- Reith, Fernando** see Friedman, Avner, 91d:35226
- Salamon, Dietmar** see Ito, Kazufumi; et al., 91m:47056
- Sforza, Daniela** Infinite delay parabolic integro-differential equations with singular kernels. 91h:45008
- Shishmar'ev, I. A.** see Naumkin, P. I., 91k:35208
- Steube, Ken** see Cannon, John R.; et al., 91b:35107
- Vilella-Bressan, Rosanna** see Dyson, Janet, 91m:34106

### 35R15 Partial differential equations on infinite-dimensional (e.g. function) spaces (= PDE in infinitely many variables) [see also 46Gxx, 58D25]

- Crandall, Michael G.** (with Lions, Pierre-Louis) Viscosity solutions of Hamilton-Jacobi equations in infinite dimensions. IV. Hamiltonians with unbounded linear terms. 91c:35205
- Dyachkin, O. D.** Some parabolic and elliptic equations in a Hilbert space. 91m:35232
- El-Zahaby, S. A.** The quasi-reversibility method application to parabolic operators with an infinite number of variables. 91g:35236
- Grobelaar-van Dalsen, Marië** On  $B$ -evolution theory and dynamic boundary conditions on a portion of the boundary. 91k:35248
- Inoue, Atsushi** A certain functional derivative equation corresponding to  $\square u + cu + bu^2 + au^3 = g$  on  $\mathbb{R}^{d+1}$ . 91a:35162
- On Hopf type functional derivative equations for  $\square u + cu + bu^2 + au^3 = 0$  on  $\Omega \times \mathbb{R}$ . I. Existence of solutions. 91h:35319
- Łedźwiec-Kowalewska, Urszula** On the optimal control problems of parabolic equations with an infinite number of variables and with equality constraints. 91k:35197
- Lions, Pierre-Louis** see Crandall, Michael G., 91c:35205
- Shakhbazyan, R. L.** The Dirichlet problem for infinite-dimensional elliptic pseudodifferential operators in a half-space. (Russian. English and Armenian summaries) 91j:35274
- Shavgulidze, E. T.** see Smolyanov, O. G., 91c:35206
- Smolyanov, O. G.** (with Shavgulidze, E. T.) Representation of the solutions of second-order linear evolution superdifferential equations by path integrals. (Russian) 91c:35206
- Sokolovskii, V. B.** Infinite-dimensional equations with the Lévy Laplacian and some variational problems. 91m:35233

## Items with secondary classifications in 35R15

- Arendt, Wolfgang** (with Batty, Charles J. K.; Robinson, Derek W.) Positive semigroups generated by elliptic operators on Lie groups. 91k:47118
- Batty, Charles J. K.** see Arendt, Wolfgang; et al., 91k:47118
- Berezanskii, Yu. M.** (with Kondrat'ev, Yu. G.) \* Спектральные методы в бесконечномерном анализе. (Russian) [Spectral methods in infinite-dimensional analysis] 91h:46002
- Da Prato, Giuseppe** Some results on parabolic equations in Hilbert spaces. 91h:35106
- Dyakina, E. B.** Three classes of infinite-dimensional diffusions. 91b:60061
- Fang, Shi Zan** Le calcul différentiel quasi-sûr et son application à l'estimation du noyau de la chaleur. (English summary) [Almost sure differential calculus and its application to the

estimation of the heat kernel] 91f:60109

- Feller, M. N.** Selfadjointness of a nonsymmetrized infinite-dimensional Lévy-Laplace operator. 91h:46044
- Fursikov, A. V.** On the statistical approach to the Navier-Stokes equations. (see 91f:35003)
- Graveren, S. E.** (with Rao, Murali) Brownian motion and eigenvalues for the Dirichlet Laplacian. 91f:35197
- Inoue, Atsushi** On functional-differential equations—a recommendation for analysis on function space. Congratulations to Professor Masao Kato on his seventieth birthday. (Japanese) 91h:58023
- (Kato, Masao) see Inoue, Atsushi, 91h:58023
- Khrennikov, A. Yu.** Equations on a superspace. 91h:46078
- Kondrat'ev, Yu. G.** see Berezanskii, Yu. M., 91h:46002
- Kuo, Hui-Hsiung** (with Obata, Nobuaki; Saito, Kimiaki) Lévy Laplacian of generalized functions on a nuclear space. 91m:46061
- Lions, Pierre-Louis** Recent progress on first order Hamilton-Jacobi equations. 91d:35051
- Viscosity solutions of fully nonlinear second-order equations and optimal stochastic control in infinite dimensions. III. Uniqueness of viscosity solutions for general second-order equations. 91b:35011
- Liskevich, V. A.** (with Semenov, Yu. A.) Conditions for the selfadjointness of Dirichlet operators. 91j:47055
- Magyar, Zoltán** Heat kernels on Lie groups. 91h:22019
- Marenich, A. S.** Solution of Lagrange and Bührmann-Lagrange equations of a countable set of variables. (Russian) 91c:22010
- Lagrange series of a countable number of variables. (Russian) 91c:22011
- Monaco, R.** On the approximation of continuum stochastic systems by a discrete stochastic system: a problem with moving boundary. 91h:35220
- Obata, Nobuaki** The Lévy Laplacian and mean value theorem. 91a:46039
- A characterization of the Lévy Laplacian in terms of infinite-dimensional rotation groups. 91m:46063
- see also Kuo, Hui-Hsiung; et al., 91m:46061
- Rao, Murali** see Graveren, S. E., 91f:35197
- Robinson, Derek W.** see Arendt, Wolfgang; et al., 91k:47118
- Roitberg, Yu. A.** (with Sheftel, Z. G.) Denseness of solutions of boundary value problems for Petrovskii elliptic systems in function spaces on manifolds. (Russian. English summary) 91k:35077
- Saito, Kimiaki** see Kuo, Hui-Hsiung; et al., 91m:46061
- Samolilenko, V. Gr.** Construction of recursion operators and their invariants for nonlinear infinite-dimensional dynamical systems. (Russian) 91m:58082
- Semenov, Yu. A.** see Liskevich, V. A., 91j:47055
- Sheftel, Z. G.** see Roitberg, Yu. A., 91k:35077
- Takao, Fukiko** Generalized vector measures and path integrals for hyperbolic systems. 91h:35068
- Temam, Roger** Dynamical systems in infinite dimension. 91a:58110
- Titov, S. S.** Analyticity of linear one-parameter Lie-Bäcklund groups. 91j:58177

### 35R20 Partial operator-differential equations (i.e. PDE on finite-dimensional spaces for abstract space valued functions) [see also 34Gxx, 47A50, 47D03, 47D06, 47D09, 47H15, 47H20]

- Aliev, B. A.** see Aliev, I. V., 91m:35234
- Aliev, I. V.** (with Aliev, B. A.) Coercive solvability of boundary value problems for elliptic operator-differential equations with an operator in the boundary conditions. 91m:35234
- Anosov, V. P.** Estimates for the solutions of elliptic equations with unbounded operator coefficients in the Hölder space. (Russian) (Not in MR)
- Babaev, Azad A.** see Shakhmurov, V. B., 91m:35236
- Da Prato, Giuseppe** Some results on parabolic equations in Hilbert spaces. 91h:35106
- El-Sayed, A. M. A.** A mixed problem for a second order Sturm-Liouville equation. (Arabic summary) 91g:35237
- Januszewski, Janusz** On the Darboux problem in Banach spaces. 91c:35151
- Malovichko, V. A.** Boundary value problems for systems of differential equations with operator coefficients. 91m:35235
- Ricceri, Biagio** Sur le problème de Cauchy pour certaines équations linéaires aux dérivées partielles d'ordre infini dans les espaces de Banach. (English summary) [On the Cauchy problem for certain linear partial differential equations of infinite order in Banach spaces] 91c:35207
- Rzepecki, Bogdan** The Darboux problem for hyperbolic partial differential equations in Banach spaces. 91d:35221
- Shakhmurov, V. B.** (with Babaev, Azad A.) Coercive problems for an equation with parameters. (Russian) 91m:35236

## Items with secondary classifications in 35R20

- Berezanskii, Yu. M.** (with Gekhtman, M. I.) Inverse problem of spectral analysis and nonabelian chains of nonlinear equations. 91j:35271
- de Brito, Eliana Henriques** Time-periodic weak solutions. 91k:35023
- Cannarsa, Piermarco** (with Da Prato, Giuseppe) Some results on nonlinear optimal control problems and Hamilton-Jacobi equations in infinite dimensions. 91c:49049
- Da Prato, Giuseppe** see Cannarsa, Piermarco, 91c:49049
- Dobrokhotov, S. Yu.** (with Tolstova, O. L.) Application of conservation laws in asymptotic problems for equations with an operator-valued symbol. (Russian) 91h:35201
- Gekhtman, M. I.** see Berezanskii, Yu. M., 91j:35271
- Januszewski-Walczak, Danuta** Existence of solutions of first order partial differential-functional equations. (Italian summary) 91h:35318
- Malovichko, V. A.** Nonlocal boundary value problems for systems of differential equations with operator coefficients of elliptic type. (Russian) 91b:35036
- Mazano, Salvatore A.** Generalized solutions of partial differential inclusions depending on a parameter. (Italian summary) 91c:35171
- Nazarov, V. I.** Solvability of linear differential equations in scales of Roumieu spaces that are constructed by means of a given unbounded linear operator. 91h:35007

- Reissig, Michael About the theorem of Holmgren for abstract Cauchy-Kovalevskaya problems. 91g:35007
- Shi, Peter Equivalence of variational inequalities with Wiener-Hopf equations. 91g:35183
- Tarkhanov, N. N. A criterion for the solvability of the ill-posed Cauchy problem for elliptic systems. 91c:35152
- Tolstova, O. L. see Dobrokhotov, S. Yu., 91h:35201
- Yanuv, M. Yu. Conjugacy problems for operator-differential equations with a small parameter. 91h:34095

### 35R25 Improperly posed problems for PDE

- Knabner, Peter (with Vessella, Sergio) Stability estimates for ill-posed Cauchy problems for parabolic equations. 91d:35222
- Tarkhanov, N. N. A criterion for the solvability of the ill-posed Cauchy problem for elliptic systems. 91c:35152
- Vessella, Sergio see Knabner, Peter, 91d:35222

### Items with secondary classifications in 35R25

- Beretta, Elena (with Vessella, Sergio) Stability results for an inverse problem in potential theory. (Italian summary) 91j:31002
- Desch, Wolfgang (with Wheeler, Robert L.) Destabilization due to delay in one-dimensional feedback. 91c:35028
- Eldén, Lars see Seidman, Thomas L., 91h:35327
- Engl, Heinz W. Inverse und inkorrekt gestellte Probleme. [Inverse and ill-posed problems] (see 91k:00033)
- Flitt, A. D. The numerical and analytical solution of ill-posed systems of conservation laws. 91d:65198
- Pap, Endre Sequence spaces in the theory of generalized functions and ill-posed problems. 91a:46036
- (Sabatier, Pierre C.) see Basic methods of tomography and inverse problems, 91e:00003
- Seidman, Thomas L. Some "complexity" issues for ill-posed problems. 91m:65313
- (with Eldén, Lars) An "optimal filtering" method for the sideways heat equation. 91h:35327
- Temirbulatov, S. I. Solvability of an ill-posed heat conduction problem with an oblique derivative. (Russian. Kazakh summary) 91j:35115
- Vessella, Sergio see Beretta, Elena, 91j:31002
- Wheeler, Robert L. see Desch, Wolfgang, 91c:35028
- Yanov, S. I. On the Cauchy problem for a class of systems that is not of Cauchy-Kovalevskaya type. (Russian) 91b:35006
- Zaidman, Samuel Nonexistence results for the abstract Cauchy problem. 91k:34091

### Items listed otherwise than by author

- Basic methods of tomography and inverse problems ★ Basic methods of tomography and inverse problems. 91e:00003
- Brace-ans-Nappe ★ Basic methods of tomography and inverse problems. 91e:00003
- School:
- Numerical Analysis ★ Basic methods of tomography and inverse problems. 91e:00003

### 35R30 Inverse problems (undetermined coefficients, etc.) for PDE

- Abdel Halim, I. H. see Hassan, A. A. M., 91f:35270a and 91f:35270b
- Adylova, I. V. The regularization method and the method of successive approximations for solving an inverse coefficient problem. (Russian) 91c:35208
- Agoshkov, V. I. (with Mishneva, A. P.) ★ О нахождении коэффициента дисперсии в нелинейном параболическом уравнении. (Russian) [On the determination of the dispersion coefficient in a nonlinear parabolic equation] 91c:35209
- Alessandrini, Giovanni (with Sylvester, John) Stability for a multidimensional inverse spectral theorem. 91f:35198
- Singular solutions of elliptic equations and the determination of conductivity by boundary measurements. 91c:35210
- Anikonov, Yu. E. (with Belov, Yu. Ya.) Single-valued solvability of an inverse problem for a parabolic equation. 91d:35223
- Some relations in inverse problems for kinetic equations. 91j:35275
- Relations in some inverse problems for nonlinear equations. (Not in MR)
- Baev, A. V. On the solution of an inverse problem for the wave equation from information given at a point. 91f:35199
- Uniqueness of a solution of an inverse problem for an equation in acoustics, and an inverse spectral problem. (Russian) 91h:35320
- Barashkov, A. S. Solution of an inverse problem for the Helmholtz equation with a quasi-one-dimensional coefficient. 91d:35224
- Barilon, Victor A two-dimensional inverse eigenvalue problem. 91c:35153
- Belov, Yu. Ya. see Anikonov, Yu. E., 91d:35223
- Borisov, A. B. (with Kiselev, V. V.) Inverse problem for an elliptic sine-Gordon equation with an asymptotic behaviour of the cnoidal-wave type. 91a:35163
- Borovikov, I. P. (with Gaponenko, Yu. L.) An inverse problem for the wave equation with an unknown source of perturbations. 91h:35200
- An inverse problem for the Helmholtz equation. (Russian) 91k:35249
- Borzi, C. (with Frisch, H. L.; Gianotti, R.; Percus, J. K.) Inverse solution for some travelling-wave reaction-diffusion problems. 91h:35201
- Bubnov, B. A. New formulations of multidimensional inverse problems for hyperbolic equations in classes of functions of finite smoothness. (Russian) (see 91g:35004)
- (with Salimov, K. D.) Solvability of multidimensional inverse problems and elementary solutions for the transport equation. (Russian) (see 91g:35004)
- Cannon, John R. (with DuChateau, Paul; Steube, Ken) Unknown ingredient inverse problems and trace-type functional-differential equations. 91b:35107
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- Wang, Ea Ping Suboptimal estimates for discrete decentralized systems. (Chinese. English summary) (Not in MR)
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- Applied symbolic dynamics for the Lorenz-like map. 91f:58076

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- Burgat, Christian (with Benzaouia, Abdellah) Stability properties of positively invariant linear discrete time systems. 91c:39003
- *see also* Benzaouia, Abdellah, 91b:39008
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- Cao, Qing Jie The partial stability for linear discrete systems. 91d:39001
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- Kharitonov, V. L. Stability of a family of difference systems. 91f:39002
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- Kurbanshiev, S. Z. *see* Valeev, K. G.; et al., (Not in MR)
- Mamedov, I. G. *see* Korovin, S. K.; et al., 91m:39004
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- Bergh, Michael O. (with Getz, Wayne M.) Stability and harvesting of competing populations with genetic variation in life history strategy. 91c:92043
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- Chen, Zong Ji The exponential stability of nonautonomous difference equations for adaptive control. (Chinese summary) (Not in MR)
- Cheng, Sui Sheng (with Hsieh, Liang Yu; Chao, Dale Z. T.) Discrete Lyapunov inequality conditions for partial difference equations. 91j:39001
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- Emel'yanov, S. V. (with Zhivoglyadov, P. V.; Korovin, S. K.; Nikitin, S. V.) A semigroup approach to problems of describing a class of admissible perturbations. 91i:93076
- Fernando, K. Vince Stability of 2D state-space systems. 91f:93072
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- Rogers, E. L. (with Owens, David H.) Stability analysis for discrete linear multipass processes with nonunit memory. 91i:93094
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- Lin, Shwu Huey (with Yang, Kuo Sheng) On discrete analogue of Lyapunov inequality. 91d:39002
- Mickens, Ronald E. (with Shoosmith, J. N.) A discrete model of a modified Burgers' partial differential equation. 91j:39001
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- Molchanov, A. A. *see* Kubyskhina, N. N.; et al., (Not in MR)
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- Romanov, V. G. (with Kabanikhin, S. I.; Bakanov, G. B.) Investigation of a differential-difference analogue of a three-dimensional problem of integral geometry. 91c:39004
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- Cheng, Sui Sheng (with Hsieh, Liang Yi) Addendum: "On discrete analogues of Lyapunov inequality" [Tamkang J. Math. 20 (1989), no. 2, 169-186; MR 91d:39002] by S. H. Lin and K. S. Yang. 91h:39002
- Chen, I-Liang Large-time behavior of solutions of Lax-Friedrichs finite difference equations for hyperbolic systems of conservation laws. 91j:65148
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- Current problems in the spectral theory of disordered systems. (Russian) (*see* 91i:00015)
- Common, A. K. (with Hafez, S. T.) Continued-fraction solutions to the Riccati equation and integrable lattice systems. 91c:35131
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- Godoy, Eduardo Recurrence relations in  $n$ -kernels on the unit circle. (Spanish. English summary) (*see* 91m:00037)
- Grossman, Bernard (with Kephart, Thomas W.) Lattice instantons in the large dimension limit. 91f:81133
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- Mimachi, Katsuhisa Connection problem in holonomic  $q$ -difference system associated with a Jackson integral of Jordan-Pochhammer type. 91b:33023
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- Sussler, S. K. On the theory of difference analogues of special functions of hypergeometric type. 91a:33015
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- *see also* Atakishiev, N. M., 91c:33001
- Uvarov, V. B. *see* Nikiforov, A. F., 91i:33008 and 91i:33009
- Wade, Bruce A. *see* Strikwerda, John C.; et al., 91d:65155
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- *see also* Allakhverdiev, B. P., 91h:47048
- Dai, Hua The construction of periodic Jacobi matrices from spectral data. (Chinese. English summary) 91c:65026
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- Kiryatskii, E. E. Functions with a nonzero finite difference. 91k:30066
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- (Patashinski, A. Z.) *see* Harmuth, Henning F., 91h:81003
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- Baranovskii, A. L. *see* Rybin, Yu. K., (Not in MR)
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- Rybin, Yu. K. (with Baranovskii, A. L.) Design of a dynamical system with stochastic self-induced oscillations with a given correlation function. (Russian) (Not in MR)
- Items with secondary classifications in 39A99
- Bar-Shalom, Yaakov *see* Blom, Henrik A. P., 91f:60110 and (Not in MR)
- Berezanski, Yu. M. (with Gekhtman, M. I.) Inverse problem of spectral analysis and nonabelian chains of nonlinear equations. 91j:35271
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- (with Bar-Shalom, Yaakov) Correction to: "Time-reversion of a hybrid state stochastic difference system with a jump-linear smoothing application" [IEEE Trans. Inform. Theory 36 (1990), no. 4, 836-847]. (Not in MR)
- Gallicchio, Elisabetta *see* Ruiz-Claeyssen, Julio Cesar; et al., 91c:34014
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- Okabe, Yasunori On a stochastic difference equation for the multi-dimensional weakly stationary process with discrete time. 91b:60031
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- Bielsko-Biala The Twenty-seventh International Symposium on Functional Equations, August 14-24, 1989, Bielsko-Biala—Katowice—Kraków, Poland. 91b:39010
- Katowice The Twenty-seventh International Symposium on Functional Equations, August 14-24, 1989, Bielsko-Biala—Katowice—Kraków, Poland. 91b:39010
- Kraków The Twenty-seventh International Symposium on Functional Equations, August 14-24, 1989, Bielsko-Biala—Katowice—Kraków, Poland. 91b:39010
- Symposium: Functional Equations The Twenty-seventh International Symposium on Functional Equations, August 14-24, 1989, Bielsko-Biala—Katowice—Kraków, Poland. 91b:39010

### 39B05 General

- Nakan, Mitsuhiro T. Numerical verification of the existence of functional equations. (Japanese) (Not in MR)

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- Beránek, Jaroslav (with Chvalina, Jan) On Tabor's problem concerning a certain quasi-ordering of iterative roots of functions. 91h:39003
- Chvalina, Jan *see* Beránek, Jaroslav, 91h:39003
- Kominek, Zygfryd ★ Convex functions in linear spaces. 91g:46010
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### 39B12 Iteration theory, iterative and composite equations [see also 26A18, 30D05, 58F08]

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- ordering of iterative roots of functions. 91h:39003  
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 Vattay, G. *see* Szépfalussy, Péter; et al., 91m:58096  
 Walker, Peter L. The exponential of iteration of  $e^x - 1$ . 91b:58211  
 Wenzel, Wolfgang *see* Biham, Ofer, 91j:58101  
 Zdon, Marek Cezary On quasi-continuous iteration semigroups and groups of real functions. 91e:54093  
 Zheng, Wei Mou Construction of median itineraries without using anti-harmonics. 91g:58141  
 — *see also* Hao, Bai Lin, 91g:58069  
 Zitarosa, A. *see* Di Lena, Giovanni; et al., 91g:65114

#### 39B20 Equations for one unknown function of one variable, rank greater than one (1985)

- Kuczma, Marek Note on multiplicative functions. (Not in MR)  
 Si, Jian Guo Analytic solutions to a class of linear functional equations. (Chinese) (Not in MR)  
 Soldatov, M. A. Solvability of some linear functional equations. (Russian) (see 91b:34004)  
 Items with secondary classifications in 39B20  
 Crstici, Borislav (with Neagu, M.; Neamtu, N.) Functional equations and quadrature formulae. (Romanian summary) (see 91e:00034)  
 Neagu, M. *see* Crstici, Borislav; et al., (91e:00034)  
 Neamtu, N. *see* Crstici, Borislav; et al., (91e:00034)

#### 39B22 Equations for real functions

- Berg, Lothar Über die Translationsgleichung. [On the translation equation] 91g:39002  
 Chen, Fang Yue Smooth solutions of Feigenbaum's functional equation. 91b:39011  
 Crstici, Borislav *see* Kannappan, P., 91d:39004  
 Ebanks, B. R. Branching inset entropies on open domains. 91c:39009  
 Jarczyk, Witold Existence and uniqueness of continuous solutions of nonlinear functional equations are generic properties. 91g:39003  
 Kannappan, P. (with Crstici, Borislav) Two functional identities characterizing polynomials. 91d:39004  
 Kominek, Zygfryd On a local stability of the Jensen functional equation. 91c:39010  
 Lajkó, K. Differences. 91c:39011  
 Lisei, Guido On the functional equation  $\phi(x, y, z) = \phi(\phi(x, y), t, z)$ . (Italian summary) 91m:39009  
 Losonczi, László On a functional equation of sum form. 91d:39005  
 Lucht, Lotz G. Mittelwertungleichungen für Lösungen gewisser Differenzgleichungen. (English summary) [Mean value inequalities for solutions of certain difference equations] 91h:39004  
 Sablik, Maciej The continuous solution of a functional equation of Abel. 91a:39006  
 Sahoo, P. K. Circularly symmetric separable functions are Gaussian. (Not in MR)  
 Székelyhidi, László An abstract superstability theorem. 91c:39012  
 — Stability properties of functional equations describing the scientific laws. 91f:39005

#### Items with secondary classifications in 39B22

- Aczél, János Basics of functional equations arising from recent applications to economics and to other sciences. 91h:90012  
 Basselier, Michèle Distance measures for signal processing and pattern recognition. (French and German summaries) 91h:68099  
 Čanak, Miloš Funktionalgleichungen und Randwertaufgaben. (Serbo-Croatian summary) [Functional equations and boundary value problems] 91f:30057  
 Encheva, Tatiana I. (with Levin, A. Yu.) Finding the zeros of exponential quasi-polynomials. 91m:65138  
 Jacquet, Philippe (with Szpankowski, Wojciech) Ultimate characterizations of the burst response of an interval searching algorithm: a study of a functional equation. 91f:68089  
 Kalries, H.-H. Charakterisierungen von nirgends differenzierbaren Weierstraß-Funktionen durch Replikativität. [Characterizations of nowhere differentiable Weierstrass functions in terms of replicativity] 91g:26013  
 Levin, A. Yu. *see* Encheva, Tatiana I., 91m:65138  
 Maksa, Gyula (with Páles, Zs.) On Hosszu's functional inequality. 91d:39007  
 Mikolajski, J. Some properties of nonoscillatory solutions of a system of two difference equations. 91d:39006  
 Páles, Zs. *see* Maksa, Gyula, 91d:39007  
 Szpankowski, Wojciech *see* Jacquet, Philippe, 91f:68089

#### 39B32 Equations for complex functions [see also 30D05]

- Abouzahra, M. *see* Lewin, L., 91h:39005  
 Bruschi, M. (with Calogero, F.) General analytic solution of certain functional equations of addition type. 91f:39006  
 Bukhshtaber, V. M. Functional equations that are associated with addition theorems for elliptic functions, and two-valued algebraic groups. 91j:39002  
 Calogero, F. *see* Bruschi, M., 91f:39006  
 Lewin, L. (with Abouzahra, M.) Supernumerary polylogarithmic ladders and related functional equations. 91h:39005  
 Louboutin, Roland Solutions analytiques d'une équation fonctionnelle. (English summary) [Entire functions solutions of a functional equation] 91m:39010  
 McGill, Paul Jacobi elliptic functions and change of variable in a convolution. 91c:39013

#### Items with secondary classifications in 39B32

- Abdi, Wazir Hasan Bi-basic functional equation of hypergeometric type. 91c:33034  
 Bessis, Daniel (with Marmi, Stefano; Turchetti, G.) On the singularities of divergent majorant series arising from normal form theory. (Italian summary) 91e:58162  
 Marmi, Stefano *see* Bessis, Daniel; et al., 91e:58162  
 Székelyhidi, László Stability properties of functional equations describing the scientific laws. 91f:39005  
 Turchetti, G. *see* Bessis, Daniel; et al., 91e:58162

#### 39B52 Equations for functions with more general domains and/or ranges

- Alsina, Claudio On the stability of a functional equation arising in probabilistic normed spaces. 91b:39012  
 Baker, John A. The stability of certain functional equations. 91j:39003  
 Borelli Forti, Costanza Solutions of a nonhomogeneous Cauchy equation. (Serbo-Croatian summary) 91g:39004  
 Deeba, E. Y. (with Koh, E. L.) The Pexider functional equations in distributions. 91i:39002  
 Koh, E. L. *see* Deeba, E. Y., 91i:39002  
 Magyar, Eugen Funktionen beschränkter Homogenität. [Functions of restricted homogeneity] 91i:39003  
 Martínez Hernández, Miguel A. *see* Mederos, Otilio B., 91a:39007  
 Mederos, Otilio B. (with Martínez Hernández, Miguel A.) Approximate solution of the functional equation  $A(x)\Phi(x) + B(x)\Phi(x + \delta) = G(x)$  in the space  $L_2(\mathbb{R})$ . (Spanish. English summary) 91a:39007  
 Moszner, Zenon Sur un théorème de S. Golab. [On a theorem of S. Golab] 91h:39006  
 Ng, C. T. Jensen's functional equation on groups. 91c:39014  
 Rätz, Jörg On orthogonally additive mappings. II. 91c:39005  
 — (with Szabó, Gy.) On orthogonally additive mappings. IV. 91m:39011  
 Sánchez Soler, M. On the functional equation  $H(\tau(F, G), \zeta(F, G)) = H(F, G)$ . 91c:39015  
 Szabó, Gy. New results on quadratic functions. (Serbo-Croatian summary) 91h:39007



— Sesquilinear-orthogonally quadratic mappings. 91m:39012  
— see also Rätz, Jörg. 91m:39011

#### Items with secondary classifications in 39B52

- Acel, János Basics of functional equations arising from recent applications to economics and to other sciences. 91h:90012  
Baran, Mirosław On the graph of a quasi-additive function. 91i:39004  
Benz, Walter On weak dilatations. 91c:51040  
Berg, Lothar Über die Translationsgleichung. [On the translation equation] 91g:39002  
Cardinali, T. (with Papalini, F.) An extension of the concept of midpoint convexity for multifunctions. (Italian. English summary) 91k:26010  
Chronowski, Antoni The Pexider equation on  $n$ -semigroups and  $n$ -groups. 91g:20106  
Cohen, Joel E. see Nussbaum, Roger D., 91h:26022  
Ger, Joanna Convex functions of higher orders in some metric spaces. (Serbo-Croatian summary) 91h:26007  
Gu, Hua Min see Ramachandran, B.; et al., 91g:60023  
Hsiang, W. H. Invertibility and monotonicity on function systems. 91d:20078  
Jarczyk, Witold Existence and uniqueness of continuous solutions of nonlinear functional equations are generic properties. 91g:39003  
Lau, Ka-Sing see Ramachandran, B.; et al., 91g:60023  
Nussbaum, Roger D. (with Cohen, Joel E.) Convexity properties of generalizations of the arithmetic-geometric mean. 91h:26022  
Papalini, F. see Cardinali, T., 91k:26010  
Prešić, Slavica B. All reproductive solutions of finite equations. 91a:06019  
Ramachandran, B. (with Lau, Ka-Sing; Gu, Hua Min) On characteristic functions satisfying a functional equation and related classes of simultaneous integral equations. 91g:60023  
Smajdor, Andrzej Additive selections of superadditive set-valued functions. 91c:39017  
Tabor, József Quasi-additive functions. 91f:39007

#### 39B62 Systems of functional equations

Mikolajski, J. Some properties of nonoscillatory solutions of a system of two difference equations. 91d:39006

#### Items with secondary classifications in 39B62

Ehanks, B. R. Branching inset entropies on open domains. 91c:39009

#### 39B70 Functional equations on abstract spaces or structures (1985)

Aldae, S. A class of nonlinear equations with Volterra operators. (Russian. English summary) (Not in MR)

#### 39B72 Inequalities involving unknown functions [see also 26A51, 26Dxx]

- Baran, Mirosław On the graph of a quasi-additive function. 91i:39004  
Choczewski, B. (with Stopa, M.) Some iterative functional inequalities and Schröder's equation. 91c:39016  
Kamień, Zygfryd On approximately subadditive functions. 91k:39003  
Maksa, Gyula (with Páles, Zs.) On Hosszu's functional inequality. 91d:39007  
Matkowski, Janusz A functional inequality characterizing convex functions, conjugacy and a generalization of Hölder's and Minkowski's inequalities. 91k:39005  
Páles, Zs. see Maksa, Gyula, 91d:39007  
Smajdor, Andrzej Additive selections of superadditive set-valued functions. 91c:39017  
Stopa, M. see Choczewski, B., 91c:39016  
Tabor, József Quasi-additive functions. 91f:39007

#### Items with secondary classifications in 39B72

- Cheung, Wing Sum On Opial-type inequalities in two variables. 91d:26021  
Kamień, Zygfryd Additive and  $J$ -convex functions majorized by measurable functions. (Serbo-Croatian summary) 91c:26018  
Mitrinović, Dragoslav S. (with Pečarić, Josip E.) On an extension of Hölder's inequality. (Italian summary) 91k:26020  
Nikodem, Kazimierz On some class of midconvex functions. 91g:26017  
Pachpatte, B. G. On a class of new discrete inequalities. 91a:26018  
Pečarić, Josip E. see Mitrinović, Dragoslav S., 91k:26020  
Székelyhidi, László Stability properties of functional equations describing the scientific laws. 91f:39005  
Tóader, Gh. On a theorem of Tiberiu Popoviciu. 91e:26034

#### 39B99 None of the above, but in this section

Schmersau, Dieter Untersuchungen zur Rekursion von L. de Branges. (English summary) [Investigations concerning the recursion of L. de Branges] 91c:39006

#### Items with secondary classifications in 39B99

- Bergweiler, Walter Fix-points of meromorphic functions and iterated entire functions. 91k:30064  
Gustavsson, Jan (with Maligranda, Lech; Peetre, Jaak) A submultiplicative function. 91g:46057  
Maligranda, Lech see Gustavsson, Jan; et al., 91g:46057  
Murphy, K. A. Estimation of time- and state-dependent delays and other parameters in functional-differential equations. 91c:34108  
Paluba, Waldemar The Lipschitz condition for the conjugacies of Feigenbaum-like mappings. 91c:26006  
Peetre, Jaak see Gustavsson, Jan; et al., 91g:46057  
Sartahon, Zh. Reducibility of linear systems of differential equations with multiperiodic coefficients. (Russian. Kazakh summary) 91j:35071

Witte, H.-J. Some characterizations of distributions based on the integrated Cauchy functional equation. 91g:60022

## 40-XX Sequences, series, summability

### 40-01 Instructional exposition (textbooks, tutorial papers, etc.)

Ross, Bertram ★ Methods of summation. 91c:40001

#### Items with secondary classifications in 40-01

Kadryavtsev, L. D. ★ Курс математического анализа. Том 2. (Russian) [A course in mathematical analysis. Vol. 2] 91f:0002b

### 40-03 Historical (must also be assigned at least one classification number from Section 01)

#### Items with secondary classifications in 40-03

- Jacobsen, Lisa (with Thron, W. J.; Waadeland, Haakon) Julius Worpitzky, his contributions to the analytic theory of continued fractions and his times. 91j:01047  
Thron, W. J. see Jacobsen, Lisa; et al., 91j:01047  
Waadeland, Haakon see Jacobsen, Lisa; et al., 91j:01047  
(Worpitzky, Julius) see Jacobsen, Lisa; et al., 91j:01047

### 40-06 Proceedings, conferences, collections, etc.

#### Items with secondary classifications in 40-06

(Motornyi, V. P.) see Investigations in current problems in summation and approximation of functions and their applications, 91a:41002

#### Items listed otherwise than by author

Investigations in current problems in summation and approximation of functions and their applications ★ Исследования по современным проблемам суммирования и приближения функций и их приложениям. (Russian) [Investigations in current problems in summation and approximation of functions and their applications] 91a:41002

## 40Axx Convergence and divergence of infinite limiting processes

### 40A05 Convergence and divergence of series and sequences

- Biler, Piotr (with Witkowski, Alfred) Some comments on: "A convergence test for positive series" [Math. Notae 30 (1983), 15–18; MR 88h:40001] by F. Rossatti and D. Delbosco. (Not in MR)  
Borwein, David An inclusion theorem for Dirichlet series. 91a:40001  
Cao, Jing Tian A method for summation of series and several corollaries. (Chinese) (Not in MR)  
Classon, Tomas (with Peetre, Jaak) On an algorithm considered by Stieltjes. 91m:40001  
Connor, Jeff Two valued measures and summability. 91j:40001  
— Almost none of the sequences of 0's and 1's are almost convergent. 91i:40001 (Delbosco, Domenico) see Biler, Piotr, (Not in MR)  
Ding, Bao Fan A proposition on limits of related number sequences. (Chinese) (Not in MR)  
Fricke, Gerd H. (with Fridy, J. A.) Sequence transformations that guarantee a given rate of convergence. 91i:40002  
Fridy, J. A. see Fricke, Gerd H., 91i:40002  
Gautschi, Walter On certain slowly convergent series occurring in plate contact problems. 91j:40002  
Kadets, V. M. Rearrangements of function series and different forms of convergence. 91a:40002  
Kojeczy, Tomáš On a certain class of always convergent sequences and the Rayleigh quotient iterations. (Russian and Czech summaries) 91h:40001  
Malkowsky, Eberhard Absolute and ordinary Köthe-Toeplitz duals of some sets of sequences and matrix transformations. 91j:40003  
Peetre, Jaak see Classon, Tomas, 91m:40001  
(Rossatti, Franco) see Biler, Piotr, (Not in MR)  
Shao, Jian Bo On convergence and divergence of series  $\sum_{n=1}^{\infty} [1 - \alpha/\pi(n)]^n$ . (Chinese) (Not in MR)  
Witkowski, Alfred see Biler, Piotr, (Not in MR)  
Zhang, Xing Dai Set series and fuzzy series. (Chinese. English summary) (Not in MR)  
Zong, Xu Ping On the necessity of Dirichlet's and Abel's tests. (Chinese) (Not in MR)
- Items with secondary classifications in 40A05
- Bárány, Imre Rearrangements of series in infinite-dimensional spaces. 91g:46013  
Bondarenko, V. F. (with Moshinskii, A. V.) A transformation that improves the convergence of certain Schlömilch series. 91g:65011  
Bultheel, Adhemar ★ Laurent series and their Padé approximations. 91h:41001  
Ciasullo, L. M. (with Cochran, James A.) Accelerating the convergence of Chebyshev series. 91m:65008  
Cochran, James A. see Ciasullo, L. M., 91m:65008  
Cvejić, Stana D. see Milovanović, Igor Z.; et al., 91g:40008

- Étingof, P. I. Properties of limits of sequences with double index. (Russian) **91g:40004**  
 Klippert, John *see* Milovanović, Igor Z.; et al., **91g:40008**  
 Kovačević, Milan A. *see* Milovanović, Igor Z.; et al., **91g:40008**  
 Milovanović, Igor Z. (with Kovačević, Milan A.; Cvejić, Stana D.; Klippert, John) A modification of the Euler-Abel transform for convergent series. **91g:40008**  
 Moshinskii, A. V. *see* Bondarenko, V. F., **91g:65011**  
 Oskolkov, V. A. Hardy-Littlewood problems on the uniform distribution of arithmetic progressions. **91d:11088**  
 Riedel, Roland Konvergenzbeschleunigung von Potenzreihen mittels Euler-Bromwich-Transformation. I. [Accelerating the convergence of power series by means of the Euler-Bromwich transform. I] **91c:30004**  
 Sember, John Families of sequences of 0's and 1's in FK-spaces. **91a:46008**  
 Zeng, Huan Liang A convergence theorem for functional continued fractions and its applications. (Chinese. English summary) **91g:65034**

#### 40A10 Convergence and divergence of integrals

Items with secondary classifications in 40A10

- Mikulevičius, A. The Riesz theorem for an integral of Laplace-Stieltjes type and for the Dirichlet series. **91c:30004**

#### 40A15 Convergence and divergence of continued fractions [see also 30B70]

- Bodnar, D. I. Convergence domains and stability domains for branching continued fractions. (Russian) (see **91j:00017**)  
 — Convergence tests of Pringsheim type for branching continued fractions. **91f:40001**  
 Gu, Chuan Qing *see* Zhu, Gong Qin, **91m:40002**  
 Jacobsen, Lisa (with Masson, D. R.) On the convergence of limit periodic continued fractions  $K(a_n/1)$ , where  $a_n \rightarrow -\frac{1}{2}$ . III. **91k:40001**  
 — On the Bauer-Muir transformation for continued fractions and its applications. **91k:40002**  
 — (with Waadeland, Haakon) An asymptotic property for tails of limit periodic continued fractions. **91g:40001**  
 Levrie, Paul On the relationship between generalised continued fractions and  $G$ -continued fractions. **91k:40003**  
 Masson, D. R. *see* Jacobsen, Lisa, **91k:40001**  
 Thron, W. J. Separate convergence of general  $T$ -fractions. **91g:40002**  
 Waadeland, Haakon Boundary versions of Worpitzky's theorem and of parabola theorems. **91f:40002**  
 — *see also* Jacobsen, Lisa, **91g:40001**  
 Zhu, Gong Qin (with Gu, Chuan Qing) Convergence theorems for Thiele-type vector continued fractions. (Chinese. English summary) **91m:40002**

Items with secondary classifications in 40A15

- Aebischer, Beat The limiting behavior of sequences of Möbius transformations. **91i:51007**  
 Bowman, K. O. (with Shenton, L. R.) ★ Continued fractions in statistical applications. **91g:62018**  
 Brezinski, Claude On the asymptotic behaviour of continued fractions [Appl. Numer. Math. **4** (1988), no. 2-4, 231-239; MR 90a:30010]. (see **91m:41002**)  
 Bultheel, Adhemar *see* Levrie, Paul, **91a:65244**  
 Cargo, G. T. Perfect approximant points of  $\tanh z$ . **91h:30013**  
 Cooper, S. Clement  $\delta$ -fraction solutions to Riccati equations. **91a:34005**  
 Cuyt, Annie A. M. (with Verdonk, Brigitte M.) A review of branched continued fraction theory for the construction of multivariate rational approximants [Appl. Numer. Math. **4** (1988), no. 2-4, 263-271; MR 89k:41018]. (see **91m:41002**)  
 Druux, André Convergence acceleration of sequences of Padé approximants. **91j:65006**  
 Giannozzi, Paolo (with Grosso, Giuseppe; Moroni, Saverio; Pastori Parravicini, Giuseppe) The ordinary and matrix continued fractions in the theoretical analysis of Hermitian and relaxation operators [Appl. Numer. Math. **4** (1988), no. 2-4, 273-295; MR 89g:81111]. (see **91m:41002**)  
 Gill, John Limit periodic iteration [Appl. Numer. Math. **4** (1988), no. 2-4, 297-308; MR 89f:54061]. (see **91m:41002**)  
 Grosso, Giuseppe *see* Giannozzi, Paolo; et al., (see **91m:41002**)  
 Hautot, A. Convergence acceleration of continued fractions of Poincaré type [Appl. Numer. Math. **4** (1988), no. 2-4, 309-322; MR 90b:65005]. (see **91m:41002**)  
 Hovstad, R. M. Irrational continued fractions. **91h:11013**  
 Jacobsen, Lisa (with Waadeland, Haakon) When does  $f(z)$  have a regular  $C$ -fraction expansion or a normal Padé table? **91d:30003**  
 — Domains of validity for some of Ramanujan's continued fraction formulas. **91b:30014**  
 Jones, William B. (with Thron, W. J.) Continued fractions in numerical analysis [Appl. Numer. Math. **4** (1988), no. 2-4, 143-230; MR 90e:65021]. (see **91m:41002**)  
 Kuchinskaya, Kh. I. Approximation of functions by two-dimensional continued fractions. (Russian) (see **91j:00017**)  
 Laugwitz, Detlef Kettenwurzeln und Kettenoperationen. [Continued roots and chain operations] **91g:40003**  
 Lembarli, Alami Convergence acceleration of limit  $k$ -periodic continued fractions [Appl. Numer. Math. **4** (1988), no. 2-4, 337-349; MR 89j:65012]. (see **91m:41002**)  
 Levrie, Paul (with Bultheel, Adhemar) Convergence acceleration for the numerical solution of second-order linear recurrence relations. **91a:65244**  
 Lin, Feng Ch'ing *see* Lin, Shieh Hong, **91k:65018**  
 Lin, Shieh Hong (with Lin, Feng Ch'ing) An  $O(\log n)$  algorithm for computing periodic continued fractions and its applications. **91k:65018**  
 Magnus, Arne (with McCabe, John H.) On a continued fraction for  $\log_2(1+x)$ . **91c:30006**  
 Mathews, Jerold Gear trains and continued fractions. **91h:11007**  
 McCabe, John H. On continued fractions associated with polynomial type Padé approximants, with an application. **91k:41031**  
 — *see also* Magnus, Arne, **91c:30006**  
 Moroni, Saverio *see* Giannozzi, Paolo; et al., (see **91m:41002**)

- Njåstad, Olav Multipoint Padé approximants and related continued fractions. **91c:41016**  
 — Convergence of the Schur algorithm. **91c:30008**  
 Pastori Parravicini, Giuseppe *see* Giannozzi, Paolo; et al., (see **91m:41002**)  
 Shenton, L. R. *see* Bowman, K. O., **91g:62018**  
 Sri Ranga, A. On a recurrence formula associated with strong distributions. **91c:30068**  
 Thron, W. J. Some results on separate convergence of continued fractions. **91m:30006**  
 — *see also* Jones, William B., (see **91m:41002**)  
 Verdonk, Brigitte M. *see* Cuyt, Annie A. M., (see **91m:41002**)  
 Waadeland, Haakon Computation of continued fractions by square-root modification: reflections and examples [Appl. Numer. Math. **4** (1988), no. 2-4, 361-375; MR 89g:65017]. (see **91m:41002**)  
 — *see also* Jacobsen, Lisa, **91d:30003**

#### 40A20 Convergence and divergence of infinite products

- Slepčuk, K. M. Uniform convergence of some classes of infinite products. (Russian) (see **91a:41002**)

Items with secondary classifications in 40A20

- Alzer, Horst Inequalities for Weierstrass products. **91j:26020**

#### 40A25 Approximation to limiting values (summation of series, etc.) {For the Euler-Maclaurin summation formula, see 65B15.}

- Borwein, Jonathan M. (with Borwein, Peter; Dilcher, K.) Pi, Euler numbers, and asymptotic expansions. **91c:40002**  
 Borwein, Peter *see* Borwein, Jonathan M.; et al., **91c:40002**  
 Dilcher, K. *see* Borwein, Jonathan M.; et al., **91c:40002**  
 Items with secondary classifications in 40A25  
 André-Jeannis, R. Lambert series and the summation of reciprocals in certain Fibonacci-Lucas-type sequences. **91j:11011**  
 Cytkowski, Z. Summation of series by some substitutions. **91k:65016**  
 Daras, Nicholas J. The convergence of Padé-type approximants to holomorphic functions of several complex variables. **91j:65005**  
 Denis, Remy Y. On certain summations of  $q$ -double series. **91f:33009**  
 Ross, Bertram ★ Methods of summation. **91c:40001**  
 Sedogho, Guy Antoine Convergence acceleration of some logarithmic sequences. **91m:65009**  
 Settu, S. A. Approximation of continuous functions by  $F(a, q)$  means. (Russian summary) **91h:42007**  
 Sun, Xing Ming On the rate of convergence of the Feller-Trotter probability type operator for functions of bounded variation. (Chinese summary) **91f:41020**  
 Zhu, Lai Yi Approximation of function by Euler means. **91b:42008**

#### 40A30 Convergence and divergence of series and sequences of functions

- Laugwitz, Detlef Kettenwurzeln und Kettenoperationen. [Continued roots and chain operations] **91g:40003**  
 Lanina, M. A. Sets of points of absolute and conditional convergence of series of continuous functions on metric spaces. (Russian) (see **91j:00017**)  
 Items with secondary classifications in 40A30  
 Bashmakova, I. B. Tauberian-type theorems for Laplace series. (Russian) **91c:40009**  
 Beloruset, V. B. Determination of the convergence domain of the Volterra series. **91h:50002**  
 Buldygin, V. V. (with Solntsev, S. A.) ★ Функциональные методы в задачах суммирования случайных величин. (Russian) [Functional methods in problems of the summation of random variables] **91h:60013**  
 Leont'eva, T. A. On the convexity of the domain of convergence of a series of generalized exponentials. **91m:30004**  
 Mikulevičius, A. The Riesz theorem for an integral of Laplace-Stieltjes type and for the Dirichlet series. **91c:30004**  
 Sidi, Avram On a generalization of the Richardson extrapolation process. **91j:65004**  
 Solntsev, S. A. *see* Buldygin, V. V., **91h:60013**  
 Valadier, Michel Différents cas où, grâce à une propriété d'extrémalité, une suite de fonctions intégrables faiblement convergente converge fortement. [Various cases in which, thanks to an extremality property, a weakly convergent sequence of integrable functions converges strongly] **91f:49021**

#### 40A99 None of the above, but in this section

- Belasová, Jana (with Ewert, Janina; Šalát, Tibor) On the effectiveness of tests for the absolute convergence of infinite series. **91a:40003**  
 Ewert, Janina *see* Belasová, Jana; et al., **91a:40003**  
 Makhoul, John Volume of the space of positive definite sequences. **91c:40001**  
 Šalát, Tibor *see* Belasová, Jana; et al., **91a:40003**  
 Sándor, József On the irrationality of some alternating series. (Romanian summary) **91c:40003**  
 Items with secondary classifications in 40A99  
 Achuthan, P. (with Ranagarajan, R.) On a continued fraction representation of general Cauchy third form. **91j:41018**  
 Feng, Ke Qin Some iterative recurrence formulas. (Chinese summary) **91k:26001**  
 Gustafson, Robert A. A summation theorem for hypergeometric series very-well-poised on  $G_2$ . **91h:33020**  
 Orhan, C. Almost  $A$ -boundedness. **91h:46016**

- Pachpatte, B. G. A note on Copson's inequality involving series of positive terms. 91h:26021  
 Ranagaran, R. see Achuthan, P., 91j:41018

#### 40B05 Multiple sequences and series (should also be assigned at least one other classification number in this section)

- Etingof, P. I. Properties of limits of sequences with double index. (Russian) 91g:40004  
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 Szalay, L. A high-indices theorem for strong Cesàro summability of double series. (Russian summary) 91g:40005

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- Szalay, L. On the strong Cesàro summability of double series. (Russian summary) 91d:40003

#### 40Cxx General summability methods

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- Cakalli, H. Cauchy preserving series methods in topological groups. 91e:40009

#### 40C05 Matrix methods

- Baronov, S. see Kolk, E., 91e:40002  
 Bilotskii, N. N. Section convergence and convexity theorems. 91b:40001  
 Ishiguro, Kazuo (with Meyer-König, W.; Zeller, Karl) Die Turán'sche Matrix als Produkt einer Euler-Knopp- und einer Taylor-Matrix. (English summary) [Turán's matrix as product of an Euler-Knopp and a Taylor matrix] 91c:40004  
 Kolk, E. (with Baronov, S.) Summability of numerical and abstract sequences by numerical matrices. (Russian. English summary) 91e:40002  
 Kuz'mich, V. I. Generalization of a theorem of R. Agnew on the ineffectiveness of the normal summability method. (Russian) 91e:40003  
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 Selvaraj, C. R. Convexity preserving summability matrices. 91e:40005  
 Srinivasan, V. K. (with Rangachari, M. S.) Summability methods in valued fields. 91m:40004  
 Zeller, Karl see Ishiguro, Kazuo; et al., 91c:40004

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- Başar, Feyzi see Solak, İhsan, 91m:46019  
 Bingham, N. H. (with Stadtmüller, Ulrich) Jakimovski methods and almost-sure convergence. 91f:60082  
 Buldygin, V. V. (with Sointsev, S. A.) A generalized summation of random series. 91d:60113  
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 Connor, Jeff Two valued measures and summability. 91j:40001  
 Das, Gokulananda Modified means. 91c:40008  
 Giannozzi, Paolo (with Grosso, Giuseppe; Moroni, Saverio; Pastori Parravicini, Giuseppe) The ordinary and matrix continued fractions in the theoretical analysis of Hermitian and relaxation operators [Appl. Numer. Math. 4 (1988), no. 2-4, 273-295; MR 89g:81111]. (see 91m:41002)  
 Grosso, Giuseppe see Giannozzi, Paolo; et al., (91m:41002)  
 Leary, F. C. The chi functions in generalized summability. 91f:40013  
 Macphail, M. S. (with Orhan, C.) Some properties of absolute summability domains. 91f:40012  
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 — Strongly  $\sigma$ -summable and strongly  $\sigma$ -convergent sequences. 91f:40006  
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#### 40C10 Integral methods

- Burlyai, M. F. On a logarithmic method for the summation of integrals. 91a:40004  
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#### 40C15 Function-theoretic methods (including power series methods and semicontinuous methods)

- Metz, Hans-Rudolf Asymptotische Approximation und Interpolation stetiger Funktionen durch Funktionenreihen mit Anwendungen in der Limitierungstheorie. (English summary) [Asymptotic approximation and interpolation of continuous functions by function series with applications in limitation theory] 91m:40006  
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 Van Assche, Walter Pollaczek polynomials and summability methods. 91d:40001  
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 Moroz, Alexander Analytic continuation by means of the methods of divergent series. 91d:30002  
 Petrichkovich, V. M. Semiscalar equivalence and factorization of polynomial matrices. 91j:15004  
 Riedel, Roland Konvergenzbeschleunigung von Potenzreihen mittels Euler-Bromwich-Transformation. I. [Accelerating the convergence of power series by means of the Euler-Bromwich transform. I] 91e:30004  
 Thorpe, B. see Cakalli, H., 91g:40010

#### 40C99 None of the above, but in this section

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- Mustafin, M. A. Summability of root vector series of nonlocal elliptic problems by the Abel method. (Russian) 91d:35157

#### 40Dxx Direct theorems on summability

##### 40D05 General theorems

- Hall, Eric B. (with Wise, Gary L.) A curiosum concerning discrete time convolution. 91f:40004  
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- Burlyai, M. F. On a logarithmic method for the summation of integrals. 91a:40004  
 Sağ, Ekrem Invariant means and generalization of a theorem of S. Mishra. (Turkish summary) 91b:47027

##### 40D09 Structure of summability fields

- Leiger, T. The structure of fields of  $\lambda$ -summability of matrices. (Russian. German summary) 91a:40005  
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- Connor, Jeff Two valued measures and summability. 91j:40001  
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##### 40D15 Convergence factors and summability factors

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- Bor, Hüseyin Multipliers for  $[N, p_n]_k$  summability of Fourier series. 91b:42011  
 — (with Sarigöl, M. Ali) A note on absolute summability factors. 91c:40011  
 — A note on a theorem of Mazhar. (Arabic summary) 91m:40009  
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 Solaiman, W. T. Notes on two summability methods. 91m:40010

##### 40D20 Summability and bounded fields of methods

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- Przytycki, Bronisław On some increasing sequence of regular matrices which is not majorizable by any iteration product of matrix transformations. (Polish summary) 91c:40006

##### 40D25 Inclusion and equivalence theorems

- Al-Madi, Azmi K. An extension of the Rogosinski-Bernstein summability methods. 91c:40007  
 Borwein, David Asymptotic relationships between Dirichlet series. 91g:40006  
 Cakalli, H. Series transformations in topological groups. 91b:40002  
 Das, Gokulananda Modified means. 91c:40008  
 Luke, Stanley D. Series to series form of the  $L(x, t)$  and  $S(x, t)$ -transforms. 91f:40005  
 Sağ, Ekrem Strongly  $\sigma$ -summable and strongly  $\sigma$ -convergent sequences. 91f:40006  
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#### 40D99 None of the above, but in this section

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Burg, Th. (with Drmota, Michael; Tichy, Robert F.) Some new results in summability theory. 91m:60051

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#### 40Exx Inversion theorems

##### 40E05 Tauberian theorems, general

Bashmakova, I. B. Tauberian-type theorems for Laplace series. (Russian) 91c:40009

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Das, Gokulananda (with Rao, K. A. S. S. V. K.) Quasi-convex sequence spaces and matrix transformations. 91d:40002

Karimova, M. M. Tauberian theorems with a remainder term of type  $(R, \lambda, k)$  and  $(R, \lambda, \mu, k, d)$ . 91a:40006

Körle, Hans-Heinrich Cesàro limitability by Tauberian conclusions. 91m:40007

Krainova, L. I. Tauberian theorems for power series and Laplace integrals. (Russian. Tajiki summary) 91a:40007

Kratz, Werner (with Stadtmüller, Ulrich)  $O$ -Tauberian theorems for  $J_p$ -methods with rapidly increasing weights. 91h:40003

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Petersen, G. M. The closure of Tauberian sets. 91f:40007

Rao, K. A. S. S. V. K. see Das, Gokulananda, 91d:40002

Reimnitz, Peter A Tauberian theorem for combined limits of functions of two variables. 91h:40004

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Tietz, Hubert Tauberian theorems of  $J_p \rightarrow M_p$ -type. 91i:40003

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Armitage, David H. (with Maddox, Ivor J.) Discrete Abel means. 91h:40006

Barrios García, Javier A. (with Betancor, Jorge Juan) Asymptotic expansions and Tauberian theorems for a generalized Hankel transformation. 91k:44007

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Burlyai, M. F. On a logarithmic method for the summation of integrals. 91a:40004

Fink, A. M. A Tauberian approach to asymptotic stability of competition equations. 91a:44001

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— On conjugate  $\Pi$ -variation and the coefficients of power series. 91i:30001

Kuttner, Brian (with Parameswaran, Mangalam R.) The converse of a Tauberian theorem for Hausdorff methods. 91c:40015

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##### 40E10 Growth estimates

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— (with Sarigöl, M. Ali) A note on absolute summability factors. 91c:40011

— A note on a theorem of Mazhar. (Arabic summary) 91m:40009

Novikova, N. S. Absolute matrix summability of degree  $p$  of the sequences  $\{nB_n(i)\}$ . (Russian) (see 91a:41002)

Polovina, N. T. (with Slepčuk, K. M.) Conditions for the summability, of strong degree  $p$ , of numerical series. (Russian) (see 91a:41002)

Prasad, Kanhaiya On some aspects of strong  $(J, p_n)$  summability. 91h:40005

Sarigöl, M. Ali see Bor, Hüseyin, 91c:40011

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— On lacunary strong  $\sigma$ -convergence. 91f:40009

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Bor, Hüseyin Multipliers for  $[N, p_n]_k$  summability of Fourier series. 91b:42011

Das, Gokulananda (with Misra, Shashi Kanta) Absolute almost convergence with an index. (Italian summary) 91c:46012

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Macphail, M. S. (with Orhan, C.) Some properties of absolute summability domains. 91f:40012

Melnik, A. F. The Tauberian theorem with a remainder for absolute summability by the Abel method. (Russian) 91f:40008

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Patra, Brundaban On the absolute  $(\alpha, \beta)$ -summability of some series associated with a Fourier series and its allied series. 91k:42017

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Chen, Guo Liang<sup>3</sup> Boundedness of strong means of Cesàro means on  $H^p(\Sigma_n)$  ( $0 < p < 1$ ). (Chinese. English summary) 91d:40004

Khare, Satya Prakash (with Singh, Man) On the Cesàro-Nörlund summability of a sequence of Fourier coefficients. 91c:40014

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Kumar, Arun (with Prasad, Govind) A necessary condition for  $(F_1)$ -effectiveness of  $(C, 1)(N, p_n)$  method. 91k:40004

Kuttner, Brian (with Parameswaran, Mangalam R.) The converse of a Tauberian theorem for Hausdorff methods. 91c:40015

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Andrienko, V. A. On the rate of Cesàro summability of orthogonal series. (Russian summary) 91c:42031

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- Cass, F. P. (with Kratz, Werner) Nörlund and weighted mean matrices as operators on  $l_p$ . 91g:47024
- Jena, Subhas Chandra (with Abid, Md.) Absolute generalised Cesàro summability of a Fourier series. 91m:42005
- (with Swain, Sakuntala) Generalised absolute Cesàro summability of the allied series of a Fourier series. 91m:42006
- Kantawala, Pragna S. (with Agrawal, S. R.; Patel, C. M.) On Nörlund summability of orthonormal series. 91a:42026
- Khare, Satya Prakash On the Nörlund summability of Legendre series. 91k:42036
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- Körte, Hans-Helmut Cesàro limitability by Tauberian conclusions. 91m:40007
- Kratz, Werner see Cass, F. P., 91g:47024
- Maddox, Ivor J. Point spectra of Cesàro matrices. 91a:47034
- (with Wickstead, A. W.) Spectra of Cesàro and Hölder operators. 91e:40008
- Mikhailin, G. A. Tauberian theorems with a remainder for summation methods of Hölder and Cesàro type. 91m:40008
- Móricz, Ferenc (with Rhoades, B. E.) Comparison theorems for double summability methods. 91E:40003
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- Corrigendum to: "Generalized harmonic summability of a sequence of Fourier coefficients" [Analysis 4 (1984), no. 3-4, 323-334; MR 86c:42015]. 91e:42009
- see also Móricz, Ferenc, 91E:40003
- Seddighi, Karim Infinite matrices. 91c:47055
- Selvaraj, C. R. Convexity preserving summability matrices. 91e:40005
- Singh, Amar Nath (with Khare, Satya Prakash)  $(N, p, q)$  summability of the series conjugate to the derived Fourier series. (Not in MR)
- Strikwerda, John C. (with Wade, Bruce A.) Cesàro means and the Kreiss matrix theorem. 91m:15028
- Sulaiman, W. T. On absolute Cesàro summability of infinite series. 91j:40005
- Notes on two summability methods. 91m:40010
- Swain, Sakuntala see Jena, Subhas Chandra, 91m:42006
- Szalay, L. On the strong Cesàro summability of double series. (Russian summary) 91d:40003
- A high-indices theorem for strong Cesàro summability of double series. (Russian summary) 91g:40005
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#### 40G10 Abel, Borel and power series methods

- Armitage, David H. (with Maddox, Ivor J.) Discrete Abel means. 91h:40006
- Cvejić, Stana D. see Milovanović, Igor Ž.; et al., 91g:40008
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- Loday-Richaud, Michèle Introduction à la multisommabilité. [Introduction to multisummability] 91h:40007
- Maddox, Ivor J. see Armitage, David H., 91h:40006
- Milovanović, Igor Ž. (with Kovačević, Milan A.; Cvejić, Stana D.; Klippert, John) A modification of the Euler-Abel transform for convergent series. 91g:40008
- Tret'yak, N. V. A property of the Borel matrix. (Russian) 91j:40006

Items with secondary classifications in 40G10

- Jaja, R. P. Summability theorems connected with a generalized convolution transform. 91h:40003
- Kokhanovskii, A. P. A condition for the equivalence of the Abel and Voronoi summability methods. (Russian) 91E:40010
- Mei'nik, A. F. The Tauberian theorem with a remainder for absolute summability by the Abel method. (Russian) 91E:40008

#### 40G99 None of the above, but in this section

- Al-Madi, Azmi K. Translative of Rogosinski summability methods of different orders. 91d:40005
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- Borwein, David Tauberian theorems concerning Laplace transforms and Dirichlet series. 91e:40006
- Das, Gokulananda (with Rao, K. A. S. S. V. K.) Quasi-convex sequence spaces and matrix transformations. 91d:40002
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- Luke, Stanley D. Series to series form of the  $L(r, t)$  and  $S(r, t)$ -transforms. 91E:40005
- Patra, Brundaban On the absolute zero order summability of series related to a Fourier series and its allied series. 91a:42011
- On the absolute  $(\alpha, \beta)$ -summability of some series associated with a Fourier series and its allied series. 91k:42017
- Rao, K. A. S. S. V. K. see Das, Gokulananda, 91d:40002
- Ufyanova, L. V. Summation and absolute summation of numerical sequences by Riesz methods. 91c:40013
- Wang, Kun Yang On the approximation of  $L^2$ -functions by their spherical Fourier sums on set of full measure. 91h:42013
- Xu, Zhen Ze (with Lu, Shan Zhen) A class of estimates of conjugate Bochner-Riesz means on  $HP(T^n)$  at the critical index. (Chinese. English summary) 91a:42018

#### 40H05 Functional analytic methods in summability

- Brauer, George Linear spaces of sequences. 91h:40005

- Buntinas, Martin (with Tanović-Miller, Naza) Absolute boundedness and absolute convergence in sequence spaces. 91g:40009
- Liu, Zhong Xing (with Xie, Li Zhi) Sequences in the space  $l_p$ . (Chinese) 91c:40018
- Macphail, M. S. (with Orhan, C.) Some properties of absolute summability domains. 91E:40012
- Maddox, Ivor J. (with Wickstead, A. W.) Spectra of Cesàro and Hölder operators. 91e:40008
- Noll, Dominikus Toeplitz sections and the Wilansky property. 91h:40006
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- Balibrea Gallego, Francisco The multipliers of a space of almost convergent continuous functions. 91a:46027
- Khan, F. M. (with Khan, M. A.) Matrix transformation on certain sequence spaces. 91E:46012
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- Rhoades, B. E. The point spectra for generalized Hausdorff operators. 91h:47061
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- Infinite matrices and almost boundedness. 91d:47025

#### 40J05 Summability in abstract structures [see also 43A55, 46A35, 46B15]

- Cakalli, H. Cauchy preserving series methods in topological groups. 91e:40009
- (with Thorpe, B.) On summability in topological groups and a theorem of D. L. Prullage. 91g:40010
- Leary, F. C. The chi functions in generalized summability. 91E:40013
- Pochcial, Jan On Mikusiński-Antosik diagonal theorems. 91m:40013
- Thorpe, B. see Cakalli, H., 91g:40010

Items with secondary classifications in 40J05

- Baronov, S. see Kolk, E., 91e:40002
- Chasco Ugarte, Ma. Jesús Weakly null sequences in terms of translations. (Italian summary) 91a:46013
- Kolk, E. (with Baronov, S.) Summability of numerical and abstract sequences by numerical matrices. (Russian. English summary) 91e:40002
- Liu, Yu Qiang On the Cesàro vector sequence spaces. (Chinese. English summary) 91h:46009
- Liu, Zhong Xing (with Xie, Li Zhi) Sequences in the space  $l_p$ . (Chinese) 91c:40018
- Mikhailin, G. A. Tauberian theorems with a remainder for summation methods of Hölder and Cesàro type. 91m:40008
- Natarajan, P. N. Continuous duals of certain sequence spaces and the related matrix transformations over non-Archimedean fields. 91d:46095
- Orhan, C. Almost  $A$ -boundedness. 91h:46016
- Xie, Li Zhi see Liu, Zhong Xing, 91c:40018
- Zheng, Xue An Lebesgue constants for Dirichlet kernels on compact Lie groups. (Chinese) 91c:43010

#### 41-XX Approximations and expansions {For all approximation theory in the complex domain, see 30E05 and 30E10; for all trigonometric approximation and interpolation, see 42A10 and 42A15; for numerical approximation, see 65Dxx.}

##### 41-01 Instructional exposition (textbooks, tutorial papers, etc.)

Items with secondary classifications in 41-01

- Lebedev, V. I. ★ Функциональный анализ и вычислительная математика. (Russian) [Functional analysis and numerical mathematics] 91g:00001

##### 41-02 Research exposition (monographs, survey articles)

- Bultheel, Adhemar ★ Laurent series and their Padé approximations. 91h:41001
- Deutsch, Frank Constrained best approximation. 91k:41001
- Korneichuk, N. P. Approximation theory and optimization problems. 91c:41001
- Riemenschneider, Sherman D. Multivariate cardinal interpolation. 91k:41002
- Sendov, Blagovest Kh. ★ Hausdorff approximations. 91m:41001
- Stahl, Herbert General convergence results for rational approximants. 91k:41003

Items with secondary classifications in 41-02

- Dem'yanov, V. F. (with Malozëmov, V. N.) ★ Introduction to minimax. 91k:49001
- (Gamskrelidze, R. V.) see Analysis, 91e:00001

Guo, Zhu Rui (with Jia, Rong Qing) A B-net approach to the study of multivariate splines. (Chinese. English summary) 91c:41024

Jia, Rong Qing see Guo, Zhu Rui, 91c:41024

(Lourish, D.) see Dem'yanov, V. F., 91k:49001

Malozemov, V. N. see Dem'yanov, V. F., 91k:49001

Neval, Paul Research problems in orthogonal polynomials. 91m:42023

(Newton, Dan) see Analysis, 91c:00001

Popov, Vasil A. see Sendov, Blagovest Kh., 91b:41013

Sendov, Blagovest Kh. (with Popov, Vasil A.) ★ The averaged moduli of smoothness. 91b:41013

Items listed otherwise than by author

Analysis ★ Analysis. II. 91c:00001

Encyclopaedia of Mathematical Sciences ★ Analysis. II. 91c:00001

#### 41-03 Historical (must also be assigned at least one classification number from Section 01)

Motornyi, V. P. Investigations of Dnepropetrovsk mathematicians on the optimization of quadrature formulas. 91c:41002

Items with secondary classifications in 41-03

Gusak, A. A. ★ Приближение функций. (Russian) [Approximation of functions] 91c:41003

(Kolmogorov, A. N.) see Tikhomirov, V. M., 91f:01024

Tikhomirov, V. M. A. N. Kolmogorov and approximation theory. 91f:01024

#### 41-04 Explicit machine computation and programs (not the theory of computation or programming)

Alfeld, Peter (with Eyre, David J.; Schumaker, Larry L.) Machine-aided investigation of multivariate spline spaces. (see 91j:41001)

Eyre, David J. see Alfeld, Peter; et al., 91j:41001

Schumaker, Larry L. see Alfeld, Peter; et al., 91j:41001

Items with secondary classifications in 41-04

Barnhill, Robert E. Computer aided geometric design. 91k:65041

Lie, M. A. see Rosen, I. G., 91k:93035

Rosen, I. G. (with Lie, M. A.) Computational methods for the solution of infinite-dimensional discrete-time regulator problems with unbounded input. 91k:93035

#### 41-06 Proceedings, conferences, collections, etc.

(Brezinski, Claude) see Continued fractions and Padé approximants, 91m:41002

(Chui, Charles K.) see Approximation theory, 91j:41001 and 91j:41002

(Hansmann, Werner) see Multivariate approximation and interpolation, 91m:41003

(Jetter, Kurt) see Multivariate approximation and interpolation, 91m:41003

(Motornyi, V. P.) see Investigations in current problems in summation and approximation of functions and their applications, 91a:41002

(Schumaker, Larry L.) see Approximation theory, 91j:41001 and 91j:41002

(Ward, Joseph D.) see Approximation theory, 91j:41001 and 91j:41002

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All-Union School:

Theory of the Approximation of Functions ★ Всесоюзная Школа "Теория Приближения Функций". (Russian) [All-Union School "Theory of the Approximation of Functions"] 91a:41001

Approximation theory ★ Approximation theory VI. Vol. I. 91j:41001

— ★ Approximation theory VI. Vol. II. 91j:41002

College Station, TX ★ Approximation theory VI. Vol. I. 91j:41001

— ★ Approximation theory VI. Vol. II. 91j:41002

Continued fractions and Padé approximants ★ Continued fractions and Padé approximants. 91m:41002

Duisburg ★ Multivariate approximation and interpolation. 91m:41003

Investigations in current problems in summation and approximation of functions and their applications ★ Исследования по современным проблемам суммирования и приближения функций и их приложений. (Russian) [Investigations in current problems in summation and approximation of functions and their applications] 91a:41002

Lutsk ★ Всесоюзная Школа "Теория Приближения Функций". (Russian) [All-Union School "Theory of the Approximation of Functions"] 91a:41001

Multivariate approximation and interpolation ★ Multivariate approximation and interpolation. 91m:41003

Symposium:

Approximation Theory ★ Approximation theory VI. Vol. I. 91j:41001

— ★ Approximation theory VI. Vol. II. 91j:41002

Workshop:

Multivariate Approximation and Interpolation ★ Multivariate approximation and interpolation. 91m:41003

Items with secondary classifications in 41-06

(Ciesielski, Zbigniew) see Approximation and function spaces, 91k:00017

(Korneichuk, N. P.) see Problems in analysis and approximation, 91b:00035

(Nikol'skii, S. M.) see Theory of functions and approximations, 91j:00017

(Olver, Frank W. J.) see Asymptotic and computational analysis, 91b:00040

(Wong, Roderick) see Asymptotic and computational analysis, 91b:00040

Items listed otherwise than by author

Approximation and function spaces ★ Approximation and function spaces. 91k:00017

Asymptotic and computational analysis ★ Asymptotic and computational analysis. 91b:00040

Birthday:

Olver, Frank W. J. ★ Asymptotic and computational analysis. 91b:00040

Problems in analysis and approximation ★ Вопросы анализа и приближения. (Russian) [Problems in analysis and approximation] 91b:00035

Saratov ★ Теория функций и приближений. Часть 2. (Russian) [Theory of functions and approximations. Part 2] 91j:00017

School:

Theory of Functions and Approximations ★ Теория функций и приближений. Часть 2. (Russian) [Theory of functions and approximations. Part 2] 91j:00017

Symposium:

Asymptotic and Computational Analysis ★ Asymptotic and computational analysis. 91b:00040

Theory and applications of differentiable functions of several variables ★ Theory and applications of differentiable functions of several variables. XIII. (Not in MR)

Theory of functions and approximations ★ Теория функций и приближений. Часть 2. (Russian) [Theory of functions and approximations. Part 2] 91j:00017

Warsaw ★ Approximation and function spaces. 91k:00017

Winnipeg, MB ★ Asymptotic and computational analysis. 91b:00040

#### 41A05 Interpolation [see also 42A15 and 65D05]

Ahmad, Mansoor On Abel's theorem, Cauchy's condensation test and integral test for convergence of an infinite series. (Not in MR)

Akhlaghi, M. R. (with Chak, A. M.; Sharma, Ambikeshwar) (0, 3) interpolation on the zeros of  $\pi_n(x)$ . 91b:41001

— (with Jakimovski, A.; Sharma, Ambikeshwar) Equiconvergence of some complex interpolatory polynomials. 91b:41002

Akopyan, A. A. (with Gevorgyan, O. V.; Saakyan, A. A.) Two-dimensional Hermite interpolation. (Russian) (Not in MR)

Allasia, Giampietro (with Besenghi, Renata; Demicheli, V.) Weighted arithmetic means possessing the interpolation property. 91m:41004

Assmus, S. V. Interpolation and smoothing of integral means by parabolic splines. (Russian) 91c:41003

Bajpai, Priti (with Saxena, R. B.) Some regular and singular pairs of Birkhoff interpolation. 91c:41001

Baker, G. B. (with Mills, T. M.; Vértesi, Péter) On Hermite-Fejér interpolation with equidistant nodes. 91b:41001

Baldus, K. On the convergence of the derivatives of Lagrange interpolating polynomials. 91c:41004

Barnsley, Michael F. (with Harrington, Andrew N.) The calculus of fractal interpolation functions. 91c:41004

Besenghi, Renata see Allasia, Giampietro; et al., 91m:41004

de Boor, Carl (with Ron, Amos) On multivariate polynomial interpolation. 91c:41005

Bos, L. P. (with Salkauskas, K.) Moving least-squares are Backus-Gilbert optimal. 91a:41003

— A characteristic of points in  $\mathbb{R}^2$  having Lebesgue function of polynomial growth. 91b:41002

— Some remarks on the Fejér problem for Lagrange interpolation in several variables. 91c:41004

— On certain configurations of points in  $\mathbb{R}^n$  which are unsolvable for polynomial interpolation. 91m:41005

Buhmann, M. D. (with Micchelli, Charles A.) Completely monotonic functions for cardinal interpolation. (see 91j:41001)

— Multivariate interpolation in odd-dimensional Euclidean spaces using multiquadrics. 91c:41006

— Multivariate cardinal interpolation with radial-basis functions. 91f:41001

Chak, A. M. see Akhlaghi, M. R.; et al., 91b:41001

Cheney, E. W. see Dyn, Nira; et al., 91a:41005

Chui, Charles K. (with Diamond, Harvey) A characterization of multivariate quasi-interpolation formulas and its applications. 91c:41002

— (with Stöckler, Joachim; Ward, Joseph D.) Invertibility of shifted box spline interpolation operators. 91m:41006

— (with Shen, Xie Chang) On Hermite-Fejér interpolation in a Jordan domain. 91c:41007

Davydov, O. V. Some conditions for the convergence of interpolated Lagrangian processes on the classes  $A_R$  and  $C^\infty$ . (Russian) (see 91a:41002)

— Convergence of Lagrange interpolation processes in classes of differentiable functions. (Not in MR)

Demicheli, V. see Allasia, Giampietro; et al., 91m:41004

Diamond, Harvey see Chui, Charles K., 91c:41002

Dyn, Nira (with Light, William A.; Cheney, E. W.) Interpolation by piecewise-linear radial basis functions. I. 91a:41005

Fomenko, A. V. Multidimensional trigonometric interpolation. 91f:41002

Gao, Jun Bin Multivariate Stirling numbers and their properties. (Chinese summary) 91j:41003

Gasca, Mariano (with Martínez, José Javier) On the solvability of bivariate Hermite-Birkhoff interpolation problems. 91m:41007

Gevorgyan, O. V. see Akopyan, A. A.; et al., (Not in MR)

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- (with Vértési, Péter) Erratum: "Hermite-Fejér interpolation with boundary conditions for  $p$ -normal sets". 91m:41010b
- von Radziewski, Karla On periodic Hermite interpolation by translation of a kernel function and its derivatives. 91k:41007
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- Nguyễn Văn Mận Interpolation problems induced by right and left invertible operators and its applications to singular integral equations. 91m:47003
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- Bosworth, Ken W. An algorithm for the analysis of constraints in approximation problems. (see 91j:41001)
- Brosowski, Bruno (with Guerreiro, Claudia) Stability of best rational Chebyshev approximation. 91m:41049
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- Cao, Jia Ding (with Gonska, Heinz H.) Computation of De Vore-Gopengauz-type approximants. (see 91j:41001)
- Dhage, B. C. An application of fixed point theorem in approximation theory. (Not in MR)
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- Egger, A. G. (with Huotari, Robert) Rate of convergence of the discrete Pólya algorithm. 91c:41070
- Eiermann, Michael (with Starke, Gerhard) The near-best solution of a polynomial minimization problem by the Carathéodory-Fejér method. 91f:41021
- Elosser, P. Douglas Chebyshev coefficients in approximation of powers of  $x$ . 91h:41022
- Fang, Ming The Chebyshev theory of a variation of  $L_p$  ( $1 < p < \infty$ ) approximation. 91c:41071
- Feng, Guo Hui (with von Golitschek, M.) On the failure of proximality of tensor-product subspaces. 91j:41041
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- Kamontavicius, Darius A criterion for the existence of finite-dimensional Chebyshev subspaces in the spaces  $L_p$ . 91k:41048
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- Sweetis, J. J. (with Weinstein, S. E.; Xu, Yuesheng) The characterization of best  $n$ -convex approximation on  $L_p[0, 1]$ . (see 91j:41002)
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- Georgiev, P. Gr. Uniqueness of the alternating points of the linear and convex Chebyshev approximation. 91k:41014
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- Ubhayas, Vasant A.  $L_p$  approximation from nonconvex subsets of special classes of functions. 91a:41022
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- Pinkus, Allan (with Strauss, Hans)  $L^1$ -approximation with constraints. 91b:41023
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- Xu, Shu Sheng Characterization theorem of generalized polynomial of best approximation having bounded coefficients. 91b:41015

#### 41A55 Approximate quadratures

- Ascarì, Aldo (with Pavani, Raffaella) Some matrix generalized inverses occurring in quadrature and differentiation of tabular function. (Italian summary) 91a:41034
- Busarova, T. N. Some estimates for best quadrature formulas with weight. (Russian) 91c:41035
- Delves, Franz-Jürgen  $r$ th order blending rectangle rules. 91c:41078
- Dryanov, Dimitar P. Birkhoff type quadrature formulae for  $2\pi$ -periodic functions. 91c:41079
- (with Rahman, Qazi I.; Schmeisser, Gerhard) Converse theorems in the theory of approximate integration. 91c:41080
- Quadrature formulae for entire functions of exponential type. 91m:41051
- Dubin, V. V. Optimal quadrature formulas for classes of functions with a bounded mixed difference. (Russian) (Not in MR)
- Dunaichuk, E. E. Weighted quadrature formulas, best with respect to coefficients, of the form  $\sum_{k=1}^n \sum_{i=0}^{m-1} A_{ki} f^{(i)}(x_k)$  for some classes of differentiable functions. (Russian) (see 91a:41002)
- Necessary conditions for optimality of quadrature formulas with weight on some classes of differentiable functions. (Russian) (see 91a:41002)
- Exact asymptotics of the remainder of the Hermitian quadrature formula for classes of functions  $W_2^2$ . 91d:41011
- Fang, Gen Sun see Huang, Da Ren, 91m:41052
- Huang, Da Ren (with Fang, Gen Sun) The uniqueness of optimal quadrature formula and optimal interpolation knots with multiplicities in  $L_1$ . 91m:41052
- Khodzhaniyazov, Sh. F. Order of approximation of a singular integral by quadrature sums. (Russian) 91d:41012
- (Korneichuk, N. P.) see Nikolskii, S. M., 91j:41042
- Kushch, A. O. see Motornyi, V. P., (91a:41002)
- Maksudov, T. S. Quadrature formulas with fixed nodes for singular integrals. (Russian) 91c:41081
- (Medkov, K. P.) see Nikolskii, S. M., 91j:41042
- Mitra, Alexander I. The unbounded divergence of some product quadrature processes. 91c:41013
- Motornyi, V. P. (with Kushch, A. O.) The best quadrature formula of the form  $\sum_{i=1}^n p_i f(x_i)$  on the class  $W^2 H^m$ . (Russian) (see 91a:41002)
- Nikolskii, S. M. ★ Fórmulas de cuadratura. (Spanish) [Quadrature formulas] 91j:41042
- Pavani, Raffaella see Ascarì, Aldo, 91a:41034
- Rahman, Qazi I. see Dryanov, Dimitar P.; et al., 91c:41080
- Schmeisser, Gerhard see Dryanov, Dimitar P.; et al., 91c:41080
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- Wang, Chung-Lie see Xu, Li Zhi; et al., 91c:41036
- Xu, Li Zhi (with Tomkins, R. J.; Wang, Chung-Lie) A quadrature method for a class of strongly oscillatory infinite integrals. 91c:41036

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- Boyanov, Borislav D. (with Nikolov, Geno P.) Comparison of Birkhoff type quadrature formulae. 91c:65034
- (with Huang, Da Ren) Comparison of optimal quadrature formulas. 91d:65041
- Brass, Helmut Universal quadrature rules in the space of periodic functions. 91a:65057
- Cools, Ronald (with Schmid, Hans Joachim) Minimal cubature formulae of degree  $2k-1$  for two classical functionals. (German summary) 91d:65042
- Delves, Franz-Jürgen (with Nienhaus, Helmut) A trivariate Boolean cubature scheme. 91c:65039
- Dunaichuk, E. E. Existence and uniqueness of optimal weighted quadrature formulas of a certain form. (Russian) 91m:65069
- El Tarazi, M. N. (with Karaballi, A. A.) On even-degree splines with application to quadratures. 91g:41012
- Engels, H. (with Hensen, R.) Eine Klasse interpolatorischer Kubaturformeln mit Kronrod- und Patterson-erweiterung. (English summary) [A class of interpolating cubature formulas with Kronrod and Patterson extension] 91b:65050
- Eshdaviat, B. The structure of quadrature formulas for Fourier-type integrals by means of the Grebennik spline. (Russian) 91c:65051

- Fang, Gen Sun *see* Huang, Da Ren, 91f:65051
- Förster, Klaus-Jürgen (with Petras, Knut) On estimates for the weights in Gaussian quadrature in the ultraspherical case. 91d:65043
- Frontini, Marco (with Milovanović, Gradimir V.) Moment-preserving spline approximation on finite intervals and Turán quadratures. (Serbo-Croatian summary) 91m:41021
- Geri Nicolò-Amati, Laura (with Santi, Elisabetta) On some Turán-type integration rules for Cauchy principal value integrals. (see 91j:41001)
- Hasegama, Ann *see* Verlinden, P., 91f:65055
- Hasegawa, Takemitsu (with Torii, Tatsuo; Sugiura, Hiroshi) An algorithm based on the FFT for a generalized Chebyshev interpolation. 91c:65009
- Hensen, R. *see* Engels, H., 91f:65050
- Huang, Da Ren (with Fang, Gen Sun) Existence of optimal quadrature formulas with repeated nodes on  $W_p^r$ . (Chinese) 91f:65051
- *see also* Boyanov, Borislav D., 91d:65041
- Kalla, Shyam L. *see* Meyer C., Omar E., 91m:65064
- Karabali, A. A. *see* El Tarazi, M. N., 91g:41012
- Köhler, Peter On the error of compound quadrature formulas for  $r$ -convex functions. 91c:65041
- Kustov, Yu. A. Cubature formulas with the  $m$ -property for singular integrals. (Russian) (see 91a:45007)
- Maestu, J. I. On symmetric cubature formulae for planar regions. 91c:65020
- Meyer C., Omar E. (with Kalla, Shyam L.) On fractional integration operators and computational algorithms. (Spanish. English summary) 91m:65064
- Milovanović, Gradimir V. *see* Frontini, Marco, 91m:41021
- Motornyi, V. P. Investigations of Dnepropetrovsk mathematicians on the optimization of quadrature formulas. 91c:41002
- Nguyễn Thị Thiệu Hoa Oscillation properties of differential operators and convolution operators, and some applications. 91c:47100
- Nienhaus, Helmut *see* Delvos, Franz-Jürgen, 91c:65039
- Nikolov, Geno P. Existence and uniqueness of Hermite-Birkhoff Gaussian quadrature formulas. 91m:65072
- *see also* Boyanov, Borislav D., 91c:65034
- Peherstorfer, Franz On Stieltjes polynomials and Gauss-Kronrod quadrature. 91c:65042
- Petrus, Knut *see* Förster, Klaus-Jürgen, 91d:65043
- Rahman, Qazi I. (with Schmeisser, Gerhard) Characterization of the speed of convergence of the trapezoidal rule. 91d:65040
- (with Schmeisser, Gerhard) Characterization of functions in terms of rate of convergence of a quadrature process. 91k:41032
- Sakai, Manabu (with Usmani, Riaz A.) On spline-on-spline numerical integration formula. 91g:41013
- Santi, Elisabetta *see* Geri Nicolò-Amati, Laura, (91j:41001)
- Schmeisser, Gerhard *see* Rahman, Qazi I., 91d:65040 and 91k:41032
- Schmid, Hans Joachim *see* Cools, Ronald, 91d:65042
- Sugiura, Hiroshi *see* Hasegawa, Takemitsu; et al., 91c:65009
- Torii, Tatsuo *see* Hasegawa, Takemitsu; et al., 91c:65009
- Usmani, Riaz A. *see* Sakai, Manabu, 91g:41013
- Veľov, V. M. Discrete approximations of integrals of multivalued mappings. 91f:65056
- Verlinden, P. (with Hasegama, Ann) The construction of cubature formulae by continuation. (German summary) 91f:65055
- Zhuang, Bi Ru D. Jackson's estimate for the upper bound of the best approximation constant. (Chinese. English summary) 91k:42005
- 41A58 Series expansions (e.g. Taylor, Lidstone series, but not Fourier series)**
- Bezkronyi, Yu. D. Some generalizations of series in Faber polynomials. (Russian) 91d:41024
- Bilalov, B. T. The basis property of some systems of exponentials of cosines and sines. 91m:41053
- Ivanov, Yu. A. Representation of non-quasi-analytic functions by generalized Taylor series. (Russian. English summary) 91k:41053
- Kuznetchenko, V. M. Generalized Taylor series for the class of functions  $H(\overline{p}, \overline{m}, r)$ . (Russian) 91c:41082
- Oligov, B. Kh. Representation of functions by series in Faber polynomials. (Russian) 91b:41025
- Items with secondary classifications in 41A58
- Carmody, Kevin Modular parts of a function. 91c:42006
- Orekhov, B. I. Representation of analytic functions by series in polynomials. (Russian) 91b:30009
- Rvachev, V. A. Compactly-supported solutions of functional-differential equations and their applications. 91j:34104
- 41A60 Asymptotic approximations, asymptotic expansions (steepest descent, etc.) [see also 30E15]**
- Aleksandrova, E. B. An estimate for the remainder in an asymptotic expansion of integrals of a certain type. 91c:41083
- Bakan, A. G. Uniform asymptotic formulas for a class of integrals. (Russian) 91f:41023
- Baratchart, Laurent (with Olivi, Martine; Wielonsky, F.) Asymptotic properties in rational  $\beta$ -approximation. 91h:41035
- Berg, Lothar Asymptotics of integrals, series, and operators. 91c:41084
- Brands, J. J. A. M. Asymptotics of a certain integral. 91h:41036
- Dostál, Miloš (with Gaveau, Bernard) The Fourier transform of certain convex bodies. (French summary) 91g:41036
- Dzmitryshvili, M. G. Approximation of the classes  $L_{p,1}^r$  in the metric  $L_1$ . (Russian) 91f:41024
- Estrada, Ricardo (with Kanwal, R. P.) A distributional theory for asymptotic expansions. 91c:41085
- Fedoruk, M. V. The multidimensional stationary phase method. The second term of the asymptotic expansion. (Russian) 91c:41086
- Gaveau, Bernard *see* Dostál, Miloš, 91g:41036
- Jha, Shing-Wu (with Máté, Attila; Nevai, Paul) Asymptotics for the solutions of systems of smooth recurrence equations and their applications to orthogonal polynomials. (see 91j:41002)
- Jones, D. S. Uniform asymptotic remainders. 91c:41037
- Kaminski, D. On the  $n$ -variable saddle point and steepest descent methods. 91c:41087
- Kanwal, R. P. *see* Estrada, Ricardo, 91c:41085
- Kilbas, A. A. Asymptotic representations of fractional integrals. 91m:41054
- Kushpel, A. K. On an estimate for the widths of classes of smooth functions in the space  $L_p$ . 91c:41088
- Marić, Vojislav (with Radakin, Zvezdana) Regularly varying functions in asymptotic analysis. (Slovenian. English summary) (Not in MR)
- Máté, Attila *see* Jha, Shing-Wu; et al., (91j:41002)
- McClure, J. P. (with Wong, Roderick) Multidimensional stationary phase approximation: boundary stationary point. 91h:41037
- (with Wong, Roderick) Two-dimensional stationary phase approximation: stationary point at a corner. 91m:41055
- Nevai, Paul *see* Jha, Shing-Wu; et al., (91j:41002)
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- Olver, Frank W. J. On Stokes' phenomenon and converging factors. 91d:41014
- Paris, R. B. The asymptotics of Pearcey's integral for complex variables. 91d:41015
- Qu, Chong Kai (with Wong, Roderick) Transformation to canonical form for uniform asymptotic expansions. 91c:41038
- Radakin, Zvezdana *see* Marić, Vojislav, (Not in MR)
- Temme, Nico M. Uniform asymptotic expansions of a class of integrals in terms of modified Bessel functions, with application to confluent hypergeometric functions. 91h:41026
- Walz, Guido Increasing the convergence modulus of an asymptotic expansion. 91d:41016
- Wielonsky, F. *see* Baratchart, Laurent; et al., 91h:41035
- Wong, Roderick *see* Qu, Chong Kai, 91c:41038; McClure, J. P., 91h:41037 and 91m:41055
- Items with secondary classifications in 41A60
- Barndorff-Nielsen, Ole E. (with Cox, D. R.) ★ Asymptotic techniques for use in statistics. 91b:62063
- Basor, E. L. Toeplitz operators on weighted  $l_p$  spaces and associated asymptotics. 91a:47028
- Ben Arous, Gérard Methods de Laplace et de la phase stationnaire sur l'espace de Wiener. (English summary) [The Laplace and stationary phase methods on Wiener space] 91h:60070
- Benzine, R. *see* Kallagaine, V., 91f:42025
- van den Berg, I. P. Sur la sommation au plus petit terme des séries divergentes. (English summary) [Summation of divergent series to the smallest term] 91c:30078
- Berg, Lothar The asymptotic behaviour of certain entire functions of order zero. 91h:30044
- Berry, M. V. (with Howls, C. J.) Hyperasymptotics. 91h:34064
- Bird, J. F. *see* Stoyanov, B. J.; et al., 91m:33003
- Blatt, H.-P. On the distribution of the points of Chebyshev alternation with applications to strong unicity constants. 91j:41039
- Boyd, W. G. C. Asymptotic expansions for the coefficient functions associated with linear second-order differential equations: the simple pole case. 91c:34073
- Stieltjes transforms and the Stokes phenomenon. 91m:33001
- Bui Doan, Khanh A numerical evaluation of very oscillatory infinite integrals by asymptotics. 91j:65042
- Carlinhas, P. A. (with Fulling, Stephen A.) Computational asymptotics of fourth-order operators. 91j:65174
- Chatterji, S. D. Asymptotic formulae derived from the central limit theorem. 91m:60039
- Chen, En Peng (with Zhu, Fu Chen) Estimates of derivatives of Lebesgue functions in infinite intervals. (Chinese. English summary) 91f:26002
- Cohen, Donald S. *see* Ward, M. J.; et al., 91f:35264
- Conner, J. N. L. Practical methods for the uniform asymptotic evaluation of oscillating integrals with several coalescing saddle points. 91m:65059
- Cowling, Michael (with Disney, Shaun; Mauceri, Giancarlo; Müller, Detlef) Damping oscillatory integrals. 91d:58242
- Cox, D. R. *see* Barndorff-Nielsen, Ole E., 91b:62063
- Danev, A. V. *see* Panchev, A. N.; et al., 91k:93003
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- Farina, J. E. G. (with Mosley, S. N.) The asymptotic localization of position probability in quantum mechanics. 91g:81163
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- Frenzen, C. L. Error bounds for a uniform asymptotic expansion of the Legendre function  $Q_n^m(\cosh z)$ . 91g:33014
- Fulling, Stephen A. *see* Carlinhas, P. A., 91j:65174
- Geronimo, Jeffrey S. *see* Van Assche, Walter, 91g:42017
- Gerbachuk, V. I. (with Kharkevich, Yu. I.) Complete asymptotics of an upper bound on the deviation of quasismooth functions from their biharmonic Poisson integral. (Russian) 91c:42017
- Gramcher, Todor V. The stationary phase method in Gevrey classes and Fourier integral operators on ultradistributions. 91h:35224
- Guljarro Carranza, Piedad Gorný-Cartan inequalities in normed spaces. (Spanish. English summary) 91c:30077
- Hanson, Floyd B. Singular point and exponential asymptotics. 91d:34054
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- Howls, C. J. *see* Berry, M. V., 91h:34064
- Hunter, John K. Caustics of nonlinear waves. 91b:58020
- Jha, Shing-Wu (with Máté, Attila; Nevai, Paul) Asymptotic expansions for solutions of smooth recurrence equations. 91a:33008
- Jiang, Yuan Lin The pointwise complete asymptotic expansion for the approximation of Lipschitz functions by Hermite-Fejér interpolation polynomials. 91h:41008

- Kaliaguine, V. (with Benzine, R.) Sur la formule asymptotique des polynômes orthogonaux associés à une mesure concentrée sur un contour plus une partie discrète finie. (English summary) [An asymptotic formula for orthogonal polynomials associated with a measure concentrated on a contour plus a finite discrete part] **91f:42025**
- Kharkevich, Yu. I. see Gorbachuk, V. I. **91e:42017**
- Loday-Richaud, Michèle Introduction à la multisommabilité. [Introduction to multisummability] **91h:40007**
- Máté, Attila see Jha, Shing-Whu; et al. **91a:33008**
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- Meir, Amram (with Moon, J. W.) The asymptotic behaviour of coefficients of powers of certain generating functions. **91m:05014**
- Miller, Thomas \* Verallgemeinerte Airyfunktionen. (German) [Generalized Airy functions] **91c:58013**
- Moon, J. W. see Meir, Amram. **91m:05014**
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- Panchenkov, A. N. (with Ruzhnikov, G. M.; Danev, A. V.; Sigalov, G. F.; Neshcheret, V. I.; Zabolonova, N. A.) \* Асимптотические методы в задачах оптимального проектирования и управления движением. (Russian) [Asymptotic methods in problems of the optimal design and control of motion] **91k:93003**
- Pilićević, Stevan (with Stanković, Bogoljub; Takači, Arpad) \* Asymptotic behaviour and Stieltjes transformation of distributions. **91h:46036**
- Radiollo, M. V. (with Shukhat, A. A.) A method for constructing asymptotic approximations of roots of power-exponential equations. **91c:30074**
- Richardson, Stanley How not to tackle some singular perturbation problems. **91g:34025**
- Riedel, Roland Konvergenzbeschleunigung bei Potenzreihen durch asymptotische Entwicklung der Restsummen. (English and Russian summaries) [Acceleration of convergence through power series using asymptotic expansion of residual sums] **91h:65006**
- Rusak, V. N. (with Ta Hong Quang) Asymptotics of parabolic elements of the Chebyshev rational table for analytic functions. (Russian. English summary) **91j:30027**
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- Shackell, John Asymptotic estimation of oscillating functions using an interval calculus. **91f:65067**
- Sharafudinov, I. I. Some properties of Meixner orthogonal polynomials. (Russian) **91g:33012**
- Shukhat, A. A. see Radiollo, M. V. **91c:30074**
- Sigalov, G. F. see Panchenkov, A. N.; et al. **91k:93003**
- Soni, K. (with Soni, R. P.) A system of polynomials associated with the Chester, Friedman, and Ursell technique. **91h:30063**
- (with Temme, Nico M.) On a biorthogonal system associated with uniform asymptotic expansions. **91a:42022**
- Soni, R. P. see Soni, K. **91h:30063**
- Spirak, A. K. Approximate synthesis of some stochastic systems with a small parameter. (Russian. Tajiki summary) **91i:93126**
- Stanković, Bogoljub A structural theorem for distributions having S-asymptotic. **91c:46059**
- see also Pilićević, Stevan; et al. **91h:46036**
- Stoyanov, B. J. (with Farrell, R. A.; Bird, J. F.) Asymptotic expansions of integrals of two Bessel functions. **91m:33003**
- Ta Hong Quang see Rusak, V. N. **91j:30027**
- Takači, Arpad see Pilićević, Stevan; et al. **91h:46036**
- Temme, Nico M. On the computation of special functions by using asymptotic expansions. **91k:33001**
- Polynomial asymptotic estimates of Gegenbauer, Laguerre, and Jacobi polynomials. **91m:33016**
- (with Olde Daalhuis, A. B.) Uniform asymptotic approximation of Fermi-Dirac integrals. **91f:65048**
- see also Soni, K. **91a:42022**
- Ursell, F. Integrals with a large parameter and the maximum-modulus principle. **91m:33027**
- Van Assche, Walter (with Geronimo, Jeffrey S.) Asymptotics for orthogonal polynomials with regularly varying recurrence coefficients. **91g:42017**
- Walt, Guido Increasing the convergence modulus of an asymptotic expansion: an algorithm for numerical differentiation. **91h:65044**
- Ward, M. J. (with Odeh, F. M.; Cohen, Donald S.) Asymptotic methods for metal oxide semiconductor field effect transistor modeling. **91f:35264**
- Wei, Gaoyuan (with Eichinger, B. E.) Evaluations of distribution functions for flexible macromolecules by the saddle-point method. **91a:82083**
- Wimp, Jet Some properties of convolution sequences and asymptotics for the Taylor coefficients for products of Bessel functions. **91m:33004**
- Wong, Roderick Some recent results in uniform asymptotic expansions of special functions. **91k:33011**
- Zabolonova, N. A. see Panchenkov, A. N.; et al. **91k:93003**
- Zaderet, P. V. Asymptotic equalities for integrals of the absolute value of the sum of a multiple sine series. (Russian. English summary) **91d:42018**
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- 41A63 Multidimensional problems (should also be assigned at least one other classification number in this section)**
- Armitage, David H. (with Goldstein, Myron) Better than uniform and  $L^p$  harmonic approximation on unbounded closed sets. (see **91j:41001**)
- Bloom, Thomas On the multivariate Müntz-Szász problem. (see **91j:41001**)
- Cheney, E. W. see Light, William A. **(91j:41002)**
- Gabloniya, O. D. \* Вопросы теории приближения функций многих действительных переменных. (Russian) [Problems in the theory of approximating functions of several real variables] **91k:41054**
- Goldstein, Myron see Armitage, David H. **(91j:41001)**
- Kida, Takuro Sampling theorems for multidimensional waves with causal [causal] interpolation functions. **91h:41027a**
- Conditions of convergence with respect to extended forms of interpolatory approximation for multidimensional waves. **91h:41027b**
- Light, William A. (with Cheney, E. W.) Multivariate interpolation by sums of functions of fewer variables. (see **91j:41002**)
- The singularity of distance matrices. **91h:41038**
- Petrova, I. V. Some aspects of the theory of  $L_2$ -approximations on a hyperboloid in  $\mathbb{R}^{n,1}$ . **91g:41037**
- Ubbaya, Vasant A.  $L_p$  approximation by subsets of convex functions of several variables. **91i:41025**
- Vakarchuk, S. B. Approximation of differentiable functions of several variables. **91i:41026**
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- Ben-Artzi, Asher (with Ron, Amos) On the integer translates of a compactly supported function: dual bases and linear projectors. **91j:41009**
- Bloom, Thomas A spanning set for  $\mathcal{B}(l^p)$ . **91a:41008**
- Bondarenko, V. S. (with Boyadzhyan, A. G.; Gevorkyan, N. G.) Numerical solution of systems of linear equations on minicomputers. (Russian. Armenian summary) (see **91g:60028**)
- de Boor, Carl A local basis for certain smooth bivariate pp spaces. **91c:41023**
- (with Ron, Amos) Polynomial ideals and multivariate splines. **91g:41009**
- Quasinterpolants and approximation power of multivariate splines. **91i:41009**
- Bos, L. P. A characteristic of points in  $\mathbb{R}^2$  having Lebesgue function of polynomial growth. **91h:41002**
- Boyadzhyan, A. G. see Bondarenko, V. S.; et al. **(91g:60028)**
- Buhmann, M. D. Multivariate interpolation in odd-dimensional Euclidean spaces using multiquadrics. **91c:41006**
- Bultheel, Adhemar see Xu, Guo Liang. **91g:41020**
- Busher, D. N. Approximation of classes of periodic functions of several variables by linear positive operators. (Russian) **91c:42001**
- Chui, Charles K. (with Diamond, Harvey) A characterization of multivariate quasi-interpolation formulas and its applications. **91c:41002**
- (with Stöckler, Joachim; Ward, Joseph D.) Invertibility of shifted box spline interpolation operators. **91m:41006**
- Ciesielski, Zbigniew An algorithm for best approximating algebraic polynomials in  $L^p$  over a simplex. **91f:41005**
- Cottin, Claudia Inverse theorems for blending-type approximation. (see **91j:41001**)
- Diamond, Harvey see Chui, Charles K. **91c:41002**
- Feichtinger, Hans G. (with Gröchenig, Karlheinz) Multidimensional irregular sampling of band-limited functions in  $L^p$ -spaces. **91a:42016**
- Fischer, B. (with Freund, Roland Wilhelm) Optimal Chebyshev polynomials on ellipses in the complex plane. (see **91j:41001**)
- Freeden, Willi (with Gervens, Theo) Vector spherical spline interpolation. **91a:41011**
- Freund, Roland Wilhelm see Fischer, B. **(91j:41001)**
- Gal, Sorin Gh. Approximation of continuously differentiable functions by monotonous sequences of polynomials in two variables. (Romanian summary) **91k:41013**
- Gasca, Mariano Multivariate polynomial interpolation. **91h:65028**
- Gervens, Theo see Freeden, Willi. **91a:41011**
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- Goodman, T. N. T. (with Taani, A. A.) Cardinal interpolation by symmetric exponential box splines on a three-direction mesh. **91c:41008**
- Gröchenig, Karlheinz see Feichtinger, Hans G. **91a:42016**
- Guan, Li Tai (with Li, Yue Sheng) Multivariate polynomial natural spline interpolation to scattered data. **91h:41020**
- Guo, Zhu Rui (with Jia, Rong Qing) A B-net approach to the study of multivariate splines. (Chinese. English summary) **91c:41024**
- Haraoka, Yoshihige Theorems of Sibuya-Malgrange type for Gevrey functions of several variables. **91g:32025**
- (Hauermann, Werner) see Multivariate approximation and interpolation. **91m:41003**
- Heindel, Gerhard Some results on quadratic splines of three (and more) variables. **91c:41025**
- Hudson, Steven M. Polynomial approximation in Sobolev spaces. **91h:41007**
- Ivan, Mircea Sur une suite d'opérateurs d'approximation et d'interpolation du type blending. [A sequence of approximation and interpolation operators of blending type] **91h:41003**
- Ivanov, K. G. (with Saff, E. B.) Nongeometric convergence of best  $L_p$  ( $p \neq 2$ ) polynomial approximants. **91g:41005**
- see also Khristov, Vladimir Kh. **91g:41006**
- (Jetter, Kurt) see Multivariate approximation and interpolation. **91m:41003**
- Jia, Rong Qing Dual bases associated with box splines. **91c:41026**
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 Brown, Aldric L. On the connectedness properties of sums in finite-dimensional spaces. 91c:41090  
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- Zhou, Song Ping Extension of the Dikmeis-Nessel-Wickere theorem. (Russian. English summary) 91c:41045
- A note on a paper of W. Dickmeis, R. J. Nessel and E. van Wickeren: "A general approach to quantitative negative results in approximation theory" [in *Mathematical structure—computational mathematics—mathematical modelling*, 2, 141–147, Bulgar. Acad. Sci., Sofia, 1984; MR 87b:41036]. 91a:41040

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- Altomare, Francesco Limit semigroups of Bernstein-Schnabl operators associated with positive projections. 91a:47036
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- Berg, Lothar Asymptotics of integrals, series, and operators. 91c:41084
- Berthold, Dietmar Lagrangian interpolation operators in Hölder spaces. 91d:45003
- Bezhaev, A. Yu. (with Rozhenko, A. I.) ★ Вариационные сплайны в тензорных произведениях пространства. (Russian) [Variational splines in tensor products of spaces] 91k:65092
- Brown, Aldric L. An approximation-theoretic characterisation of inner product spaces. 91b:46021
- Campiti, Michele Riemann sequential approximation of continuous functions. (Italian summary) 91c:41019
- Chalmers, B. L. (with Metcalf, F. T.) Determination of a minimal projection from  $C[-1, 1]$  onto the quadratics. 91d:46027
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- Ivanov, K. G. (with Rivlin, T. J.; Saff, E. B.) The representation of functions in terms of their divided differences at Chebyshev nodes and roots of unity. 91m:41050
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- Knopfmacher, Arnold (with Knopfmacher, John; Ridley, J. N.) Unique factorizations of formal power series. 91b:30007
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- Kon, Mark A. (with Novak, Erich) On the adaptive and continuous information problems. 91a:65143
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- Stein, Michael L. Uniform asymptotic optimality of linear predictions of a random field using an incorrect second-order structure. 91b:62128
- Swetits, J. J. (with Weinstein, S. E.; Xu, Yuesheng) The computation of a best monotone  $L_p$  approximation for  $1 \leq p < \infty$ . 91m:65034
- Tanimoto, Shinji A characterization of best simultaneous approximations. 91a:41020
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- Torokhtil, A. P. Constructive reconstruction of continuous mappings of Banach spaces. 91k:47162
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- Tsarkov, I. G. Continuity of a metric projection, structural and approximative properties of sets. 91d:46018
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- On the interpolating spline-function in Banach spaces. (Albanian summary) 91j:41015

#### 41A80 Remainders in approximation formulas

##### Items with secondary classifications in 41A80

- Anastassiou, George A. Rate of convergence of positive linear operators using an extended complete Tchebycheff system. 91a:41017

#### 41A99 Miscellaneous topics

- de la Cal, Jesús Probabilistic methods in the theory of approximation of continuous functions. (Spanish) (see 91m:00014)

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- Basilev, A. P. A variational description of the spectrum of completely positive matrices and extremal problems in approximation theory. 91b:15025
- Cachafeiro López, Ma. Alicia (with Marcellán, Francisco) The characterization of the quasi-typical extension of an inner product. 91m:42024
- Grover, Georgi R. (with Uluchev, Rumen K.) A problem on Blaschke (Blaschke) products. 91b:26020
- Kilgore, Theodore (with Zalik, R. A.) Splicing of Markov and weak Markov systems. 91a:26009
- Marcellán, Francisco see Cachafeiro López, Ma. Alicia, 91m:42024
- Paardekooper, M. H. C. An upper and a lower bound for the distance of a manifold to a nearby point. 91c:58018
- Schwenker, Friedhelm see Zielke, Roland, 91a:26010
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- Zalik, R. A. see Kilgore, Theodore, 91a:26009
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#### 42-XX Fourier analysis

##### 42-00 General reference works (handbooks, dictionaries, bibliographies, etc.)

##### Items with secondary classifications in 42-00

- Oberhettinger, F. ★ Tables of Fourier transforms and Fourier transforms of distributions. 91g:00010

##### 42-01 Instructional exposition (textbooks, tutorial papers, etc.)

- Kislakov, S. V. Classical problems of Fourier analysis. (Russian) (see 91b:42021)
- Schroeder, M. R. Number theory and Fourier analysis applications in physics, acoustics and computer science. (see 91g:42001)
- (Torchinsky, Alberto) see Wang, Da Hai, 91m:42001
- Wang, Da Hai Comment: *Real-variable methods in harmonic analysis* [Academic Press, Orlando, FL, 1986; MR 88c:42001] by A. Torchinsky. (Chinese. English summary) 91m:42001

Items with secondary classifications in 42-01

- Bayen, François (with Margaria, Christian) ★ *Problèmes de mathématiques appliquées. Tome 3. (French)* [Applied mathematics problems. Vol. 3] 91h:00004  
 Kudryavtsev, L. D. ★ *Курс математического анализа. Том 3. (Russian)* [A course in mathematical analysis. Vol. 3] 91f:00002c  
 Margaria, Christian see Bayen, François, 91h:00004  
 Richards, Ian (with Youn, Heekyung) ★ *Theory of distributions.* 91f:46003  
 Youn, Heekyung see Richards, Ian, 91f:46003

## 42-02 Research exposition (monographs, survey articles)

- Khavin, V. P. *Methods and structure of commutative harmonic analysis. (Russian)* (see 91b:42021)

Items with secondary classifications in 42-02

- Allimov, Sh. A. (with Ashurov, R. R.; Pulatov, A. K.) *Multiple series and Fourier integrals. (Russian)* 91b:42022  
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 Berg, Christian *Lectures on Fourier analysis and potential theory. (see 91b:31001)*  
 (Gamkrelidze, R. V.) see *Current problems in mathematics. Fundamental directions*, 91b:42021  
 Johnson, Raymond L. *Changes of variable and  $A_p$  weights.* 91f:42017  
 Kenig, Carlos E. *Progress on two problems posed by Riviere. (see 91e:00023)*  
 Kislyakov, S. V. *Exceptional sets in harmonic analysis. (Russian)* 91b:43008  
 Pulatov, A. K. see Allimov, Sh. A.; et al., 91b:42022  
 Zalmanov, L. A. ★ *Преобразования Фурье, Уолша, Хаара и их применение в управлении, связи и других областях. (Russian)* [Fourier, Walsh and Haar transforms and their application to control, communication and other fields] 91i:94001

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- Current problems in mathematics. Fundamental directions* ★ *Современные проблемы математики. Фундаментальные направления. Том 15. (Russian)* [Current problems in mathematics. Fundamental directions. Vol. 15] 91b:42021  
*Itogi Nauki i Tekhniki* ★ *Современные проблемы математики. Фундаментальные направления. Том 15. (Russian)* [Current problems in mathematics. Fundamental directions. Vol. 15] 91b:42021

## 42-03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 42-03

- Coffman, Ronald R. (with Strichartz, Robert S.) *The school of Antoni Zygmund.* 91h:01091  
 (Graziosi, Gina) see Coffman, Ronald R., 91h:01091  
 (Hallquist, Julia) see Coffman, Ronald R., 91h:01091  
 Strichartz, Robert S. see Coffman, Ronald R., 91h:01091  
 (Zygmund, Antoni) see Coffman, Ronald R., 91h:01091

## 42-06 Proceedings, conferences, collections, etc.

- (Byrnes, J. S.) see *Recent advances in Fourier analysis and its applications*, 91g:42001  
 (Byrnes, Jennifer L.) see *Recent advances in Fourier analysis and its applications*, 91g:42001  
 (Rubio de Francia, José Luis) see *Conference: Mathematical Analysis*, 91m:42002

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Conference:

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 El Escorial ★ *Conference on Mathematical Analysis.* 91m:42002  
 El Ciego ★ *Recent advances in Fourier analysis and its applications.* 91g:42001  
 NATO Advanced Study Institute:  
*Fourier Analysis and its Applications* ★ *Recent advances in Fourier analysis and its applications.* 91g:42001  
*Recent advances in Fourier analysis and its applications* ★ *Recent advances in Fourier analysis and its applications.* 91g:42001

Items with secondary classifications in 42-06

- (Alfaro, Manuel) see *Rational approximation and orthogonal polynomials*, 91a:00024  
 (Combes, J. M.) see *Wavelets*, 91h:42026  
 (Grossmann, A.) see *Wavelets*, 91h:42026  
 (Ismail, Mourad E. H.) see *Orthogonal polynomials*, 91k:00039  
 (Milman, Mario) see *Harmonic analysis and partial differential equations*, 91e:00023  
 (Neval, Paul) see *Orthogonal polynomials*, 91k:00039  
 (Schonbek, Tomas) see *Harmonic analysis and partial differential equations*, 91e:00023  
 (Tchamitchian, Philippe) see *Wavelets*, 91h:42026

Items listed otherwise than by author

- Boca Raton, FL ★ *Harmonic analysis and partial differential equations.* 91e:00023

Colloquium:

- Rational Approximation and Orthogonal Polynomials* ★ *Rational approximation and orthogonal polynomials.* 91a:00024  
 Columbus, OH ★ *Orthogonal polynomials.* 91k:00039

Conference:

- Harmonic Analysis and Partial Differential Equations* ★ *Harmonic analysis and partial differential equations.* 91e:00023  
*Wavelets* ★ *Wavelets.* 91h:42026  
*Contemporary Mathematics* ★ *Harmonic analysis and partial differential equations.* 91e:00023

- Harmonic analysis and partial differential equations* ★ *Harmonic analysis and partial differential equations.* 91e:00023

Marseille ★ *Wavelets.* 91h:42026

NATO Advanced Study Institute:

- Orthogonal Polynomials and their Applications* ★ *Orthogonal polynomials.* 91k:00039  
*Orthogonal polynomials* ★ *Orthogonal polynomials.* 91k:00039  
*Rational approximation and orthogonal polynomials* ★ *Rational approximation and orthogonal polynomials.* 91a:00024  
*Wavelets* ★ *Wavelets.* 91h:42026  
 Zaragoza ★ *Rational approximation and orthogonal polynomials.* 91a:00024

## 42Axx Fourier analysis in one variable

### 42A05 Trigonometric polynomials, inequalities, extremal problems

- Arestov, V. V. (with Kondrat'ev, V. P.) *An extremal problem for nonnegative trigonometric polynomials.* 91b:42001  
 Kondrat'ev, V. P. see Arestov, V. V., 91b:42001  
 Kristiansen, G. K. Errata to: "A property of the trigonometric polynomials  $T_{m,p,q}$ " [Arch. Math. (Basel) 52 (1989), no. 5, 449-453; MR 90g:42003]. 91b:42002  
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 Maiorov, V. E. *Bernstein-Nikol'skii inequalities and estimates of norms of Dirichlet kernels for trigonometric polynomials with respect to arbitrary harmonics.* 91b:42001  
 Rüssmann, Helmut *On an inequality for trigonometric polynomials in several variables.* 91f:42001  
 Saffari, Bahman (with Smith, Brent) *Sur une note récente relative aux polynômes à coefficients  $\pm 1$  et à la conjecture d'Erdős. (French. English summary)* [On a recent note about polynomials with  $\pm 1$  coefficients and the Erdős conjecture] 91f:42002  
 Smith, Brent see Saffari, Bahman, 91f:42002

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- Bhanja, M. see Pratihari, D., 91i:60142  
 Komornik, Vilmos *Density theorems for mean periodic functions, a distributional approach.* 91g:42011  
 Pichorides, Stylianos K. *Une remarque sur le théorème de M. Riesz concernant la norme  $L^p$  de sommes partielles de séries de Taylor. (English summary)* [A remark on M. Riesz's theorem concerning the  $L^p$  norm of partial sums of Taylor series] 91k:42009  
 Pratihari, D. (with Bhanja, M.) *A result concerning real zeros of a random trigonometric polynomial. II.* 91i:60142  
 Prestini, Elena *Radial functions and regularity of solutions to the Schrödinger equation.* 91j:35035  
 Smith, Keman T. *The uncertainty principle on groups.* 91i:94008  
 Yudin, V. A. *Packings of balls in Euclidean space, and extremal problems for trigonometric polynomials.* 91a:52023  
 Zeng, Jiang *The first sign change of a cosine polynomial.* 91f:33001

### 42A10 Trigonometric approximation

- Akhobadze, T. I. *Some approximation properties of Bochner-Riesz spherical means of Fourier integrals. (Russian. English and Georgian summaries)* (Not in MR)  
 Aleksandrov, Ljudmil G. (with Dryanov, Dimitar P.) *One-sided multidimensional approximation by entire functions and trigonometric polynomials in  $L_p$ -metric,  $0 < p \leq \infty$ .* 91h:42001  
 Babenko, V. F. *Some exact inequalities for approximations of periodic functions in the space  $L_1$ . (Russian)* (see 91a:41002)  
 Berezkina, L. L. *Trigonometric Padé approximation and the best approximations of periodic functions. (Russian. English summary)* 91d:42001  
 Bushuev, D. N. *Approximation of classes of periodic functions of several variables by linear positive operators. (Russian)* 91e:42001  
 — (with Stepanets, A. I.) *Approximation of weakly differentiable periodic functions.* 91c:42001  
 Chandra, Prem *A note on degree of approximation by Nörlund and Riesz operators. (Not in MR)*  
 Dinh Dung *On recovery of functions by sampling series.* 91c:42002  
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 Efimov, A. A. *Order of approximation of continuous functions by Riesz means for nonincreasing sequences  $P = \{p_n\}_{n=0}^{\infty}$ . (Russian)* (see 91j:00017)  
 Gafarov, A. *Classes and order of saturation of some linear methods of summation of Fourier series. (Russian. Tajiki summary)* 91a:42001  
 Ganzburg, M. I. *A lower bound on best approximations of continuous functions.* 91h:42003  
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 Gotusso, L. (with Pavani, Raffaella; Roux, Delfina) *Numerical results from a regularization method for inversion of Fourier series.* 91j:42001  
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- Leon'ev, V. O. The second term in Kolmogorov's asymptotic formula for approximating Fourier series by partial sums. (Russian. English summary) **91b:42004**
- Leśniakiewicz, Maria *see* Górznińska, Maria; et al., **91b:42001**
- Majors, V. E. Trigonometric widths of some classes of smooth functions. (Russian) (*see* **91j:40017**)
- Mazhar, S. M. Approximation by logarithmic means of a Fourier series. (*see* **91j:41002**)
- Móricz, Ferenc On the integrability and  $L^1$ -convergence of complex trigonometric series. **91b:42002**
- Nasibov, F. G. Approximation by entire functions. (Russian) **91b:42004**
- Nema, Harish Kumar *see* Qureshi, K., **91b:42002**; (Not in MR) and (Not in MR)
- Nosenko, Ya. L. Approximation of functions by the Riesz means of their Fourier series. (Russian) **91b:42005**
- Pavani, Raffaella *see* Gotusso, L.; et al., **91j:42001**
- Pavliashvili, G. G. Approximation of functions of several variables by Fourier sums. (Russian. English and Georgian summaries) **91b:42006**
- Qureshi, K. (with Nema, Harish Kumar) A class of functions and their degree of approximation. (Not in MR)
- (with Nema, Harish Kumar) On the degree of approximation to functions belonging to the weighted class. (Not in MR)
- (with Nema, Harish Kumar) On the degree of approximation to a function belonging to weighted  $(L^p, w(t))$  class. **91b:42002**
- Raghuwanshi, B. P. *see* Singh, Tikam, (Not in MR)
- Rakhimova, Kh. S. *see* Israelov, M. I., **91c:42003**
- Rempulskaya, Lucyna *see* Górznińska, Maria; et al., **91b:42001**
- Roux, Delina *see* Gotusso, L.; et al., **91j:42001**
- Runck, P. O. (with Szabados, J.; Vértési, Péter) On the convergence of the differentiated trigonometric projection operators. **91c:42004**
- Setta, S. A. Approximation of continuous functions by  $F(a, q)$  means. (Russian summary) **91b:42007**
- Shogunbekov, Sh. Sh. Approximation of periodic functions by partial sums of their Fourier series. (Russian. Tajik summary) (Not in MR)
- Singh, Manoj *see* Singh, Tikam, (Not in MR)
- Singh, Tikam (with Singh, Manoj) A note on the degree of approximation to function belonging to class  $Lip(\alpha, p)$  by  $(R, \lambda, 1)$  transforms. (Hindi. English summary) (Not in MR)
- (with Raghuwanshi, B. P.) A note on the degree of approximation to a class of continuous functions by conjugate Fourier series. (Hindi. English summary) (Not in MR)
- Serich, V. A. Approximation of classes of  $(\psi, \beta)$ -differentiable functions by Cesàro means of order  $\alpha$  ( $\alpha \in \mathbb{N}$ ). (Russian) **91d:42004**
- Best simultaneous approximation of periodic functions and their derivatives. (Russian) **91g:42003**
- Stepanets, A. I. *see* Bushnev, D. N., **91c:42001**
- Szabados, J. *see* Runck, P. O.; et al., **91c:42004**
- Taberski, Roman On approximation of some periodic functions. **91b:42003**
- Vértési, Péter *see* Runck, P. O.; et al., **91c:42004**
- Wang, Kun Yang Strong uniform approximation by Bochner-Riesz means. **91c:42002**
- Xie, Ting Fan (with Zhou, Song Ping) On approximation by trigonometric Lagrange interpolating polynomials. **91b:42004**
- (Ye, Nan Fa) *see* Jiang, Gong Jian, **91b:42002**
- Zhou, Song Ping On a conjecture of F. Móricz and X. L. Shi. **91m:42003a**
- Erratum: "On a conjecture of F. Móricz and X. L. Shi". **91m:42003b**
- *see also* Xie, Ting Fan, **91b:42004**
- Zhu, Lai Yi Approximation of function by Euler means. **91b:42008**
- Approximation by Euler means with a one-sided condition. (Chinese. English summary) **91j:42002**
- Zhuang, Bi Ru D. Jackson's estimate for the upper bound of the best approximation constant. (Chinese. English summary) **91b:42005**
- Zhuik, V. V. Classes of periodic functions defined by moduli of continuity of the first order, and strong approximation. (Russian) **91b:42003**
- Items with secondary classifications in 42A10**
- Babenko, V. F. Approximations in the mean with constraints on the derivatives of approximating functions. (Russian) **91c:41006**
- (with Ligon, A. A.) Development of studies on the exact solution of extremal problems in the theory of best approximation. **91c:41009**
- Belov, M. A. Stable computation of Fourier series and integrals for discontinuous functions. (Russian) **91b:42003**
- Berisha, Muharem C. *see* Berisha, Fevzi, **91m:41048**
- Berisha, Fevzi (with Berisha, Muharem C.) A generalized modulus of smoothness of Chebyshev type. (Russian. English and Albanian summaries) **91m:41048**
- Blatt, H.-P. On the distribution of the points of Chebyshev alternation with applications to strong unicity constants. **91j:41039**
- Brutman, L. The Fourier operator of even order and its application to an extremum problem in interpolation. (*see* **91c:65003**)
- Chandra, Prem Functions of classes  $L_p$  and  $Lip(\alpha, p)$  and generalized de la Vallée-Poussin means. **91b:42013**
- Degree of approximation of functions in the Hölder metric by Borel's means. **91g:42004**
- Chen, Han Lin (with Chui, Charles K.; Micchelli, Charles A.) Asymptotically optimal sampling schemes for periodic functions. II. The multivariate case. **91g:41027**
- Chui, Charles K. *see* Chen, Han Lin; et al., **91g:41027**
- Ditzian, Zeev Equivalence of rate of approximation and smoothness. **91b:41029**
- Draud, V. V. Simultaneous approximation of functions and their derivatives by Fourier operators in the mean. (Russian) **91b:41037**
- *see also* Stepanets, A. I., **91b:41036**
- Galeev, E. M. Best approximations of classes of periodic functions. (Russian) (*see* **91j:40017**)
- Approximation of classes of periodic functions of several variables by nuclear operators. **91d:42025**
- Gröchenig, Karlheinz A new approach to irregular sampling of band-limited functions. **91b:94013**
- Jaskólski, Mirosław Contributions to fractional calculus and approximation theory on the square. **91b:26017**
- Khrstov, Vladimir Kh. Best onesided approximations and mean approximations by interpolation polynomials of periodic functions. **91b:41005**
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- Leindler, L. Sharpening of Stečkin's theorem to strong approximation. (Russian summary) **91b:42006**
- Ligon, A. A. *see* Babenko, V. F., **91c:41069**
- Mazhar, S. M. (with Totik, V.) Approximation of continuous functions by  $T$ -means of Fourier series. **91b:42010**
- Micchelli, Charles A. *see* Chen, Han Lin; et al., **91g:41027**
- Nguyễn Thị Thiệu Hoa The operator  $D(D^2 + 1)^2 \dots (D^2 + n^2)$  and trigonometric interpolation. (Russian. English summary) **91d:41002**
- Pachulia, N. L. Strong summability of Fourier series on classes of periodic functions. **91a:42005**
- Raghuwanshi, B. P. *see* Singh, Tikam, **91j:41030**
- Schmeisser, Hans-Jürgen (with Sickel, Winfried) Characterization of periodic function spaces via means of Abel-Poisson and Bessel-potential type. **91b:42018**
- Shen, Xie Chang (with Zhong, Le Fan) Generalizations of the Marcinkiewicz-Zygmund inequalities. (Chinese. English summary) **91j:42003**
- Sickel, Winfried *see* Schmeisser, Hans-Jürgen, **91c:42018**
- Sikhov, M. B. An inverse theorem in approximation theory in symmetric spaces. (Russian. Kazakh summary) **91a:41019**
- Singh, Tikam (with Raghuwanshi, B. P.) Degree of approximation by linear operators. **91j:41030**
- Soh, B. C. On the degree of approximation to periodic functions by a trigonometric spline convolution operator. **91c:41064**
- Stepanets, A. I. (with Drozd, V. V.) Simultaneous approximation of functions and their derivatives by Fourier operators in the uniform metric. (Russian) **91b:41036**
- Totik, V. *see* Mazhar, S. M., **91b:42010**
- Ufyanov, P. L. Classes of infinitely differentiable functions. **91c:42009**
- Vukolova, T. M. Sine and cosine series with multiply monotone coefficients. **91b:42010**
- Xu, Zeng Fu *see* Zheng, Xue An; et al., **91j:43009**
- Zhao, He Sheng *see* Zheng, Xue An; et al., **91j:43009**
- Zheng, Xue An (with Zhao, He Sheng; Xu, Zeng Fu) Approximation by polynomials on compact Lie groups. II. Best approximation in the  $L_p$  norm. (Chinese. English summary) **91j:43009**
- Zhong, Le Fan *see* Shen, Xie Chang, **91j:42003**
- Zhu, Lai Yi The convergence rate of Euler means sequence. **91b:42014**
- 42A15 Trigonometric interpolation**
- Motornyi, V. P. Approximation of periodic functions by interpolation polynomials in  $L_1$ . **91b:42006**
- Saxena, R. B. *see* Sharma, Ambikeshwar, **91b:42008**
- Sharma, Ambikeshwar (with Varga, Richard S.) On a 2-periodic lacunary trigonometric interpolation problem. **91b:42007**
- (with Varga, Richard S.) On a particular 2-periodic lacunary trigonometric interpolation problem on equidistant nodes. **91c:42005**
- (with Saxena, R. B.) Almost Hermitian trigonometric interpolation on three equidistant nodes. **91b:42008**
- Shen, Xie Chang (with Zhong, Le Fan) Generalizations of the Marcinkiewicz-Zygmund inequalities. (Chinese. English summary) **91j:42003**
- Varga, Richard S. *see* Sharma, Ambikeshwar, **91c:42005** and **91b:42007**
- Zhong, Le Fan *see* Shen, Xie Chang, **91j:42003**
- Items with secondary classifications in 42A15**
- Baszanski, Günter Computing discrete sine transforms. (*see* **91j:41001**)
- Brass, Helmut Optimal estimation rules for functions of high smoothness. **91g:65033**
- Fomenko, A. V. Multidimensional trigonometric interpolation. **91E:41002**
- Hasegawa, Takemitsu (with Torii, Tatsuo; Sugiura, Hiroshi) An algorithm based on the FFT for a generalized Chebyshev interpolation. **91c:65009**
- Kefzon, A. A. Interpolation of functions of harmonic bounded variation. (Russian) (*see* **91j:40017**)
- Lorentz, Rudolph Alexander Some new periodic Chebyshev subspaces. **91a:41006**
- von Radziewski, Karin On periodic Hermite-Birkhoff interpolation by translation. **91E:41002**
- Sugiura, Hiroshi *see* Hasegawa, Takemitsu; et al., **91c:65009**
- Torii, Tatsuo *see* Hasegawa, Takemitsu; et al., **91c:65009**
- Xie, Ting Fan (with Zhou, Song Ping) On approximation by trigonometric Lagrange interpolating polynomials. **91b:42004**
- Zhou, Song Ping *see* Xie, Ting Fan, **91b:42004**
- 42A16 Fourier coefficients, Fourier series of functions with special properties, special Fourier series {For automorphic theory, see mainly 11F30.}**
- Belov, A. S. Lacunary trigonometric series and functions of generalized bounded variation. (Russian. English and Georgian summaries) **91a:42002**
- Belov, M. A. Stable computation of Fourier series and integrals for discontinuous functions. (Russian) **91b:42003**
- Carmody, Kevin Modular parts of a function. **91c:42006**
- Gurilashvili, R. I. Integral moduli of continuity and Fourier coefficients. (Russian. English summary) **91c:42003**
- Kawata, Tatsuo On the convergence of series of Fourier coefficients of vector valued functions. **91b:42004**
- Kumari, Suresh *see* Ram, Babu, **91b:42005**

- Lang, W. Christopher A growth condition for Fourier coefficients of functions of bounded entropy norm. **91c:42005**
- Leblanc, Noël Sur les sommes de séries trigonométriques à variations bornées. (English summary) [On Fourier series with bounded variations] **91c:42007**
- Malešević, Jovan V. A necessary condition in Fourier coefficients theory. (Serbo-Croatian summary) **91c:42004**
- Musielak, Julian On generalized Orlicz sequence spaces of Fourier coefficients for trigonometric gap series. II. **91f:42004**
- Pak, I. N. Coefficients of Fourier series and the Lipschitz class. (Russian. English summary) **91c:42008**
- Pichorides, Stylianos K. Une remarque sur le théorème de M. Riesz concernant la norme  $L^p$  de sommes partielles de séries de Taylor. (English summary) [A remark on M. Riesz's theorem concerning the  $L^p$  norm of partial sums of Taylor series] **91k:42009**
- Ram, Babu (with Kumari, Suresh) On the integral modulus of continuity of Fourier series. **91h:42005**
- Saeki, Sadahiro (with Yamaguchi, Hiroshi<sup>2</sup>) On Hardy's inequality and Paley's gap theorem. **91f:42005**
- Sheng, Shu Yun Some properties of cosine series with  $\delta$  quasimonotone coefficients. (Chinese. English summary) (Not in MR)
- Ufyanov, P. L. Classes of infinitely differentiable functions. **91c:42009**
- Vakolova, T. M. Sine and cosine series with multiply monotone coefficients. **91k:42010**
- Yamaguchi, Hiroshi<sup>2</sup> see Saeki, Sadahiro, **91f:42005**

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- Abdullaev, S. K. (with Vasil'ev, V. B.) Invertibility of multidimensional singular integral operators over a half-space in weighted Hölder classes. **91k:47120**
- Bellán, Paul M. see Lewis, H. Ralph, **91h:35075**
- Bitsadze, M. G. Trigonometric series with monotone coefficients. (Russian. English and Georgian summaries) (Not in MR)
- Buntinas, Martin (with Tanović-Miller, Naza) Absolute boundedness and absolute convergence in sequence spaces. **91g:40009**
- Gal, Sorin Gh. Approximation in  $L^p[a, b]$  by sequences having certain properties of global monotony and applications to Fourier series. **91c:41052**
- Gózdzi, Stanisław On curves with a constant perimeter of the described polygon lines. **91f:53001**
- Leon'tev, V. O. The second term in Kolmogorov's asymptotic formula for approximating Fourier series by partial sums. (Russian. English summary) **91h:42004**
- Lewis, H. Ralph (with Bellán, Paul M.) Physical constraints on the coefficients of Fourier expansions in cylindrical coordinates. **91h:35075**
- Meyer, Yves Orthonormal wavelets. **91a:42027**
- Tanović-Miller, Naza see Buntinas, Martin, **91g:40009**
- Vasil'ev, V. B. see Abdullaev, S. K., **91k:47120**

#### 42A20 Convergence of Fourier and trigonometric series

- Bourgain, J. Problems of almost everywhere convergence related to harmonic analysis and number theory. **91k:42011**
- Chandra, Prem On the generating functions and partial sums of the Fourier series. **91h:42006**
- On the convergence criteria of a Fourier series. **91k:42012**
- Épémard, L. N. On the convergence of Fourier series in  $L$ . (Russian. English summary) **91h:42009**
- Kita, Hiroo On the constant of Hunt's  $L^p$ -estimate and control functions. **91c:42005**
- Konyagin, S. V. Divergence of Fourier series in a rearranged trigonometric system. (Russian) **91j:42004**
- Pachulia, N. L. Estimates for strong mean deviations of Fourier series. (Russian. English and Georgian summaries) (Not in MR)
- Peyrière, Jacques Almost everywhere convergence of lacunary trigonometric series with respect to Riesz products. **91f:42006**
- Sharma, Sushil Generalizations of the Sidon-Telyakovskii theorem. (Hindi. English summary) (Not in MR)
- Sheng, Shu Yun The extension of the theorems of Č. V. Stanojević and V. B. Stanojević. **91c:42010**
- Siddiqi, Rafat N. On rate of convergence of Fourier series of a function of Wiener's class. (Spanish summary) **91a:42003**
- Corrigendum: "On convergence of the conjugate Fourier series of a function of Wiener's class" [Bull. Austral. Math. Soc. 39 (1989), no. 3, 335–338; MR 90f:42006]. **91c:42006**
- Soria, Fernando Integrability properties of the maximal operator on partial sums of Fourier series. **91h:42007**
- Stanojević, Vera B.  $L^1$ -convergence of Fourier series with  $O$ -regularly varying quasimonotonic coefficients. **91d:42005**
- Tanović-Miller, Naza On Banach spaces of strongly convergent trigonometric series. **91d:42006**
- Wang, Da Hai  $O$ -regularly varying moduli of convergence of Fourier series. (Chinese. English summary) (Not in MR)

#### Items with secondary classifications in 42A20

- Fan, Ai Hua Sur la convergence de séries trigonométriques lacunaires presque partout par rapport à des produits de Riesz. (English summary) [On the almost everywhere convergence of lacunary trigonometric series with respect to Riesz products] **91g:42008**
- Kaufmann, Franz-Josef On the degree of convergence of Birkhoff's series for functions of bounded variation. **91f:34106**
- Leblanc, Noël Sur les sommes de séries trigonométriques à variations bornées. (English summary) [On Fourier series with bounded variations] **91c:42007**
- Petersen, Karl Almost everywhere convergence of some nonhomogeneous averages. **91c:47007**
- Sheng, Shu Yun Functions of generalized bounded variation and their applications to Fourier series. (Chinese. English summary) **91h:26013**

#### 42A24 Summability of Fourier and trigonometric series

- Agarwal, S. N. see Verma, S. K., (Not in MR)
- Akhobadze, T. I. On the asymptotics of Cesàro means of trigonometric Fourier series of functions in the class  $H^w$ . (Russian. English and Georgian summaries) **91a:42004**
- Bor, Hüseyin Local property of  $[N, p]_k$  summability of factored Fourier series. **91c:42007**
- Chakravarty, N. K. On the Riesz summability of a Fourier type expansion of a two component function. (Not in MR)
- Chandra, Prem Functions of classes  $L_p$  and  $Lip(\alpha, p)$  and generalized de la Vallée-Poussin means. **91k:42013**
- On the Nörlund summability of the derived Fourier series and conjugate derived Fourier series. **91c:42008**
- Degree of approximation of functions in the Hölder metric by Borel's means. **91g:42004**
- Dalela, A. K. see Prakash, Ved; et al., (Not in MR)
- Das, Gokulananda (with Panda, K. C.) On  $(D, \gamma, \delta)$  summability of Fourier series. **91m:42004**
- (with Panda, K. C.) Summability of Fourier and allied series by  $(d, \gamma, \delta)$  method. **91h:42008**
- Ferdousi, Razina (with Saxena, Ashok) On uniform Nörlund summability of successive derived Fourier and derived conjugate series. **91c:42011**
- Khare, Satya Prakash Generalized Nörlund summability of Fourier series and its conjugate series. **91h:42009**
- see also Singh, Amar Nath, (Not in MR)
- Kapriker, Yu. E. Summation of Fourier coefficients by the methods  $(C, \alpha)$ . (Russian) (Not in MR)
- Summation by the Hölder methods  $(H, k)$  of Fourier coefficients. **91f:42007**
- Leindler, L. Sharpening of Stečkin's theorem to strong approximation. (Russian summary) **91h:42006**
- Mazhar, S. M. (with Totik, V.) Approximation of continuous functions by  $T$ -means of Fourier series. **91h:42010**
- Panda, K. C. see Das, Gokulananda, **91h:42008** and **91m:42004**
- Prakash, Ved (with Verma, S. K.; Dalela, A. K.) On Taylor summability of Fourier series. (Hindi. English summary) (Not in MR)
- Rhoades, B. E. Corrigendum to: "Generalized harmonic summability of a sequence of Fourier coefficients" [Analysis 4 (1984), no. 3–4, 323–334; MR 86e:42015]. **91c:42009**
- Sarić, Vladimir N. The oscillation of sequences of linear transformations of Fourier series of the function  $f$ . (Serbo-Croatian summary) (Not in MR)
- Saxena, Ashok see Ferdousi, Razina, **91c:42011**
- Settu, S. A. On equivalence of summability of Fourier series. **91g:42005**
- Singh, Amar Nath (with Khare, Satya Prakash)  $(N, p, q)$  summability of the series conjugate to the derived Fourier series. (Not in MR)
- Topuriya, S. B.  $(C, \alpha)$ -summability of Fourier-Laplace series in  $L(S^k)$  and almost everywhere. (Russian. English and Georgian summaries) (Not in MR)
- Totik, V. see Mazhar, S. M., **91h:42010**
- Tripathi, L. M. (with Tripathi, V. N.) On almost Euler summability of a Fourier series. (Not in MR)
- Tripathi, V. N. see Tripathi, L. M., (Not in MR)
- Verma, S. K. (with Agarwal, S. N.) On almost Hausdorff summability of Fourier series. (Not in MR)
- see also Prakash, Ved; et al., (Not in MR)
- Zhu, Lai Yi The convergence rate of Euler means sequence. **91k:42014**

#### 42A28 Absolute convergence, absolute summability

- Abid, Md. see Jena, Subas Chandra, **91m:42005**
- Artemiadis, Nicolas K. Some results on the absolutely convergent series of functions and of distributions. **91k:42015**
- Boisson, L. G. (with Khalyuzova, A. I.) Absolute summability of Fourier integrals with multipliers. (Russian) (see **91a:41002**)
- Bor, Hüseyin Multipliers for  $[N, p]_k$  summability of Fourier series. **91h:42011**
- Chandra, Prem (with Kshirsagar, Varsha) A necessary and sufficient condition for an aspect of the local property of the absolute summability of a Fourier series. **91c:42010**
- (with Sharma, Harishchandra) Absolute summability of series associated with Fourier series. **91d:42007**

- Hsiang, Fu Cheng A criterion for  $[N, p]$  summability of Fourier series. 91f:42008
- Jena, Subas Chandra (with Swain, Sakuntala) Generalised absolute Cesàro summability of the conjugate series of a Fourier series. 91d:42008
- (with Abid, Md.) Absolute generalised Cesàro summability of a Fourier series. 91m:42005
- (with Swain, Sakuntala) Generalised absolute Cesàro summability of the allied series of a Fourier series. 91m:42006
- Kahane, Sylvain Ensembles de convergence absolue, ensembles de Dirichlet faibles et  $\mathcal{I}$ -idéaux. (English summary) [Sets of absolute convergence, weak Dirichlet sets and  $\mathcal{I}$ -ideals] 91k:42016
- Khaluzova, A. I. see Boitsun, L. G., (91a:41002)
- Kovtun, M. V. see Volkova, N. I., (91a:41002)
- Kahrsagar, Varsha see Chandra, Prem, 91e:42010
- Pachia, N. L. Strong summability of Fourier series on classes of periodic functions. 91a:42005
- Patra, Brundaban On the absolute zero order summability of series related to a Fourier series and its allied series. 91e:42011
- On the absolute  $(\alpha, \beta)$ -summability of some series associated with a Fourier series and its allied series. 91k:42017
- Sharma, Harishchandra see Chandra, Prem, 91d:42007
- Sulaiman, W. T. On absolute Nörlund summability of a certain derived Fourier series. 91k:42018
- On absolute Nörlund summability of Fourier series and the derived Fourier series. 91d:42009
- Swain, Sakuntala see Jena, Subas Chandra, 91d:42008 and 91m:42006
- Varshney, O. P. On the absolute matrix summability of Fourier series. 91j:42005
- Volkova, N. I. (with Kovtun, M. V.) Absolute summability of degree  $p$  of Fourier series by the Hausdorff method. (Russian) (see 91a:41002)
- Zerouali, Elhassan Estimates for inverses of  $e^{i\alpha t}$  in some quotient algebras of  $A^*$ . 91j:42006

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- Tarladze, V. I. Vector valued Fourier series and sample continuity of random processes. 91a:60109

#### 42A32 Trigonometric series of special types (positive coefficients, monotonic coefficients, etc.)

- Belov, A. S. Zeros of the sum of a trigonometric series with monotone coefficients. 91d:42010
- Chen, Guo Liang<sup>3</sup> (with Jiang, Yin Sheng; Lu, Shan Zhen) Strong approximation of Riesz means at critical index on  $H^p(T)$  ( $0 < p \leq 1$ ). 91e:42012
- Jiang, Yin Sheng see Chen, Guo Liang<sup>3</sup>; et al., 91e:42012
- Kumari, Suresh (with Ram, Babu) Integrability and  $L^1$ -convergence of sine series with generalized quasi-convex coefficients. 91j:42007
- Lu, Shan Zhen see Chen, Guo Liang<sup>3</sup>; et al., 91e:42012
- Mériz, Ferenc Integrability of double trigonometric series with special coefficients. (Russian summary) 91d:42009
- Ram, Babu see Kumari, Suresh, 91j:42007

#### Items with secondary classifications in 42A32

- Leblanc, Noël Sur les sommes de séries trigonométriques à variations bornées. (English summary) [On Fourier series with bounded variations] 91e:42007
- Mikosz, Mirosława Connections between the generalized Fourier transform and the Fourier gap series. 91b:42012
- Mériz, Ferenc On the integrability and  $L^1$ -convergence of complex trigonometric series. 91k:42002
- Sheng, Sha Yun The extension of the theorems of Č. V. Stanojević and V. B. Stanojević. 91c:42010

#### 42A38 Fourier and Fourier-Stieltjes transforms and other transforms of Fourier type

- Aggarwala, B. (with Nasim, C.) Solutions of an ordinary differential equation as a class of Fourier kernels. 91c:42013
- Ahmad, Munir see Chandhry, Muhammad Aslam, 91e:42012
- Bhatia, Rajendra (with Davis, Chandler; Koosis, Paul) An extremal problem in Fourier analysis with applications to operator theory. 91a:42006
- Chandhry, Muhammad Aslam (with Ahmad, Munir) Generalized Fourier transforms and applications in probability and statistics. 91e:42012
- Davis, Chandler see Bhatia, Rajendra; et al., 91e:42006
- Gaimnazarov, G. (with Kagadil, L. P.) Some estimates for the Fourier transform. (Russian. Tajiki summary) 91e:42013
- Gordon, E. I. On the Fourier transform in nonstandard analysis. 91g:42006
- Guri, Anvar (with Radyno, Ya. V.) Fourier series and Fourier transform of functions from Gevrey classes. (Russian. English summary) 91m:42007
- Johnson, Raymond L. Recent results on weighted inequalities for the Fourier transform. 91e:42007
- Kagadil, L. P. see Gaimnazarov, G., 91e:42013
- Koosis, Paul see Bhatia, Rajendra; et al., 91a:42006
- Lamoureux, Michael P. The Poorman's transformation on Hilbert space. 91m:42008
- Liu, Xing Quan see Zhou, Xiao Zhong, 91e:42014
- Martirosyan, V. M. Fourier transforms in  $L_2(\mathbb{R})$  with weight. (Russian. Armenian summary) 91b:42010
- Mikosz, Mirosława Connections between the generalized Fourier transform and the Fourier gap series. 91b:42012
- Nasim, C. see Aggarwala, B., 91c:42013
- Radyno, Ya. V. see Guri, Anvar, 91m:42007
- Younis, M. S. On the interpolation between certain theorems on Fourier transforms. 91b:42013

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- Artémiadis, Nicolas K. Some results on the absolutely convergent series of functions and of distributions. 91k:42015
- Baszenski, Günter (with Delvos, Franz-Jürgen) A discrete Fourier transform scheme for Boolean sums of trigonometric operators. 91b:42024
- Belov, M. A. Stable computation of Fourier series and integrals for discontinuous functions. (Russian) 91f:42003
- van Berkel, C. A. M. see de Graaf, Jan, 91g:44006
- Cordas, George (with Varga, Richard S.) Integral transforms and the Laguerre-Pólya class. 91c:30048
- Delvos, Franz-Jürgen see Baszenski, Günter, 91b:42024
- Dinh Dung On recovery of functions by sampling series. 91e:42002
- Fan, Ai Hua Sur la convergence de séries trigonométriques lacunaires presque partout par rapport à des produits de Riesz. (English summary) [On the almost everywhere convergence of lacunary trigonometric series with respect to Riesz products] 91g:42008
- Fisher, Brian (with Li, Cheng Kuan; Takaci, Arpad) The Fourier transform of distributions and the exchange formula. (Serbo-Croatian summary) 91b:46037
- Glaeske, Hans-Jürgen (with Vu Kim Tuan) Mapping properties and composition structure of convolution transforms. 91k:44009
- de Graaf, Jan (with van Berkel, C. A. M.) On a property of the Fourier-Jacobi transform. 91g:44006
- Hamel, Jaroslav A note to the Fourier method of solving partial second-order differential equations. (Russian and Czech summaries) 91a:35036
- Hanna, J. Ray (with Rowland, John H.) ★ Fourier series, transforms, and boundary value problems. 91h:00007
- Jansson, Svante (with Peetre, Jaak) Weak factorization in periodic Fock space. 91j:47033
- Khrostenko, E. S. (with Trofimov, V. N.) On a kernel of Fejér type. (Russian) 91f:45005
- Koornwinder, Tom H. (with Walter, Gilbert G.) The finite continuous Jacobi transform and its inverse. 91g:44003
- Lensky, M. P. A class of hybrid integral transforms (Legendre-Bessel-Fourier). (Russian. English summary) 91m:44002
- Li, Cheng Kuan see Fisher, Brian; et al., 91b:46037
- Parreau, François Measures with real spectra. 91f:43004
- Pavel'ev, A. G. The information structure of image functions, and the possibility of detecting systematic errors in solving ill-posed problems. 91k:65056
- Peetre, Jaak see Jansson, Svante, 91j:47033
- Rowland, John H. see Hanna, J. Ray, 91h:00007
- Takaci, Arpad see Fisher, Brian; et al., 91b:46037
- Trofimov, V. N. see Khrostenko, E. S., 91f:45005
- Varga, Richard S. see Cordas, George, 91c:30048
- Vu Kim Tuan see Glaeske, Hans-Jürgen, 91k:44009
- Walter, Gilbert G. A finite continuous Gegenbauer transform and its inverse. II. 91g:44002
- see also Koornwinder, Tom H., 91g:44003
- Zaimanov, L. A. ★ Преобразование Фурье, Уолша, Хаара и их применение в управлении, связи и других областях. (Russian) [Fourier, Walsh and Haar transforms and their application to control, communication and other fields] 91i:94001

#### 42A45 Multipliers

- Asmar, Nakhle Habib (with Berkson, Earl; Gillespie, Thomas Alastair) Summability methods for transferring Fourier multipliers and transference of maximal inequalities. 91d:42011
- Bass, Richard F. A probabilistic approach to the boundedness of singular integral operators. 91j:42008
- Berkson, Earl see Asmar, Nakhle Habib; et al., 91d:42011
- Gillespie, Thomas Alastair see Asmar, Nakhle Habib; et al., 91d:42011
- Jević, Miroslav (with Pavlović, Miroslav) On multipliers from  $H^p$  to  $l^q$ ,  $0 < q < p < 1$ . 91k:42019
- Meda, Stefano A general multiplier theorem. 91f:42010
- Pavlović, Miroslav see Jević, Miroslav, 91k:42019
- Soria, Fernando (with Weiss, Guido; Založnik, Aleš) A simple example of transference. 91i:42008
- Weiss, Guido see Soria, Fernando; et al., 91i:42008
- Založnik, Aleš see Soria, Fernando; et al., 91i:42008

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- Blower, G. A multiplier characterization of analytic UMD spaces. 91h:46019
- Božinov, Nikolai S. ★ Convolutional representations of commutants and multipliers. 91m:47002
- Cho, Yong (with Kim, Yong Chan) Hadamard products of Bloch functions and its dual spaces. 91g:30002
- Kim, Yong Chan see Cho, Yong, 91g:30002
- Kurtz, Douglas S. Sharp function estimates for fractional integrals and related operators. 91j:26018
- Ricker, Werner J. An  $L^1$ -type functional calculus for the Laplace operator in  $L^p(\mathbb{R})$ . 91h:47109

#### 42A50 Conjugate functions, conjugate series, singular integrals

- Baba-Zade, M. A. An approach to studying an ultrasingular integral. (Russian) 91b:42014
- Bustamante González, Jorge The singular integral on Hölder subclasses. (Spanish. English summary) 91m:42009
- Chikvinidze, L. N. An analogue of the Muckenhoupt condition in domains with a quasiconformal boundary. (Russian. English summary) 91b:42015
- Coffman, Ronald R. (with Semmes, Stephen) Real-analytic operator-valued functions defined in BMO. 91e:43014



- Gabidzashvili, M. A. (with Kokilashvili, V. M.) Weighted estimates for fractional integrals on curves. **91b:42016**
- Gogatishvili, A. S. Riesz transforms and maximal functions in  $\Phi(L)$  classes. (Russian and Georgian summaries) **91j:42009**
- Kokilashvili, V. M. see Gabidzashvili, M. A., **91b:42016**
- Korenovskii, A. A. Mean oscillations and the Hilbert transform. **91f:42011**
- Lekishvili, M. M. A multidimensional conjugation operator and deformation of the classes  $H(w, N)$ . (Russian. English and Georgian summaries) (Not in MR)
- Exponential integrability of the trigonometric conjugation operator. **91c:42015**
- Lu, Shan Zhen Maximal partial summation operators on weighted block spaces. (Chinese. English summary) **91f:42012**
- Lukashenko, T. P. On the modulus of continuity of a conjugate function on subsets. **91a:42007**
- Martiranyan, V. M. Operators that are similar to the Hilbert operator; splitting theorems. (Russian. Armenian summary) **91g:42007**
- Neval, Paul Hilbert transforms and Lagrange interpolation. Addendum to: "Mean convergence of Lagrange interpolation. III" [Trans. Amer. Math. Soc. **282** (1984), no. 2, 669–698; MR **85c:41009**]. **91a:42008**
- Oberlin, Daniel M. On a theorem of Privalov and a theorem of Zygmund. **91c:42016**
- Semënov, E. M. The Calderón maximal operator. (Russian) (Not in MR)
- Semmes, Stephen see Coifman, Ronald R., **91c:42014**
- Storchak, V. F. Sharp estimates for norms in  $L_p$  on some classes of conjugate functions. **91i:42009**
- Tsereteli, O. D. On the distribution function of the conjugate function of a nonnegative Borel measure. (Russian. English summary) **91a:42009**
- Items with secondary classifications in 42A50
- Asmar, Nakhle Habib The conjugate function on the finite-dimensional torus. **91d:43004**
- On a Stein and Weiss property of the conjugate function. **91b:43005**
- Exponential estimates for the conjugate function on locally compact abelian groups. **91d:43005**
- Cotlar, Mischa (with Sadosky, Cora) Two-parameter lifting theorems and double Hilbert transforms in commutative and noncommutative settings. **91f:47006**
- Dominguez, Marisela The spectral density of a completely regular multivariate continuous time process. **91e:60130**
- Weighted inequalities for the Hilbert transform and the adjoint operator in the continuous case. **91f:47068**
- Grushchinskii, S. P. Estimates for boundary values of Schwarz integrals of singular measures. (Russian) **91f:30050**
- Guadalupe Hernández, José Javier (with Rezola, M. L.) Boundary values of  $H^p$  in weighted plane domains. (Spanish. English summary) (see **91m:00037**)
- Jena, Subas Chandra (with Swain, Sakuntala) Generalised absolute Cesàro summability of the conjugate series of a Fourier series. **91d:42008**
- Leibor, M. V. Convergence of conditional means in the norm of the BMO space. **91b:42020**
- Nakazi, Takahiko (with Yamamoto, Takanori) Some singular integral operators and Helson-Szegő measures. **91g:47043**
- Patra, Brundaban On the absolute zero order summability of series related to a Fourier series and its allied series. **91e:42011**
- Rezola, M. L. see Guadalupe Hernández, José Javier, (**91m:00037**)
- Rzayev, R. M. Local estimates for a singular Cauchy integral over a nonsmooth closed curve. (Russian) (see **91a:45007**)
- Sadosky, Cora see Cotlar, Mischa, **91f:47006**
- Siddiqi, Rafat N. Corrigendum: "On convergence of the conjugate Fourier series of a function of Wiener's class" [Bull. Austral. Math. Soc. **39** (1989), no. 3, 335–338; MR **90f:42006**]. **91e:42006**
- Swain, Sakuntala see Jena, Subas Chandra, **91d:42008**
- Xiao, Jian Bin Some properties of conjugate functions. **91c:31003**
- Yamamoto, Takanori see Nakazi, Takahiko, **91g:47043**

#### 42A55 Lacunary series of trigonometric and other functions; Riesz products

- Fan, Ai Hua Sur la convergence de séries trigonométriques lacunaires presque partout par rapport à des produits de Riesz. (English summary) [On the almost everywhere convergence of lacunary trigonometric series with respect to Riesz products] **91g:42008**
- Levizon, S. V. Lacunary series with respect to periodic multiplicative systems. (Russian) (see **91j:00017**)
- Parreau, François Ergodicité et pureté des produits de Riesz. (English summary) [Ergodicity and purity of Riesz products] **91g:42009**
- Sagher, Yoram (with Zhou, Ke Cheng) Local norm inequalities for lacunary series. **91b:42017**
- Sun, Dao Chun (with Wen, Zhi Ying) Dimension de Hausdorff des graphes de séries trigonométriques lacunaires. (English summary) [Hausdorff dimension of the graphs of lacunary trigonometric series] **91b:42018**
- Takahashi, Shigeru Lacunary trigonometric series and some probability measures. **91c:42015**
- Wen, Zhi Ying see Sun, Dao Chun, **91b:42018**
- Zhou, Ke Cheng see Sagher, Yoram, **91b:42017**

Items with secondary classifications in 42A55

- Cochrane, Todd (with Dressler, Robert E.) Strong Riesz sets and polynomials. **91g:43007**
- Dressler, Robert E. see Cochrane, Todd, **91g:43007**
- Hallenbeck, David J. (with Samotij, Krzysztof) Radial variation of analytic functions with nontangential boundary limits almost everywhere. **91h:30057**
- Kholshchevnikova, N. N. Sets of lacunary trigonometric series that converge to zero. **91a:42010**
- Musieliak, Julian On generalized Orlicz sequence spaces of Fourier coefficients for trigonometric gap series. II. **91f:42004**
- Peyrière, Jacques Almost everywhere convergence of lacunary trigonometric series with respect to Riesz products. **91f:42006**

Samotij, Krzysztof see Hallenbeck, David J., **91h:30057**

#### 42A61 Probabilistic methods

Items with secondary classifications in 42A61

- Bass, Richard F. A probabilistic approach to the boundedness of singular integral operators. **91j:42008**
- Bourgain, J. Problems of almost everywhere convergence related to harmonic analysis and number theory. **91k:42011**
- Farahmand, Kambiz Level crossings of a random trigonometric polynomial. **91f:60092**
- Takahashi, Shigeru Lacunary trigonometric series and some probability measures. **91c:42015**

#### 42A63 Uniqueness of trigonometric expansions, uniqueness of Fourier expansions, Riemann theory, localization

- Gevorgyan, G. G. Sets of relative uniqueness for trigonometric series and Walsh system series. (see **91j:00017**)
- On the uniqueness of trigonometric series. **91g:42010**
- Kholshchevnikova, N. N. Sets of lacunary trigonometric series that converge to zero. **91a:42010**
- Mushegyan, G. M. (with Saakyan, A. A.) Uniqueness of a transposed series under a nonfixed transposition. (Russian) (see **91j:00017**)
- Saakyan, A. A. see Mushegyan, G. M., (**91j:00017**)
- Skopina, M. A. The localization principle for multidimensional Riesz-Marcinkiewicz sums. (Russian) **91f:42013**

Items with secondary classifications in 42A63

- Chandra, Prem (with Khirsagar, Varsha) A necessary and sufficient condition for an aspect of the local property of the absolute summability of a Fourier series. **91e:42010**
- Dutta, Tapan Kumar<sup>2</sup> (with Mukhopadhyay, S. N.) On the Riemann derivatives of  $C_p$ -integrable functions. (Russian summary) **91d:26013**
- Khirsagar, Varsha see Chandra, Prem, **91e:42010**
- Mukhopadhyay, S. N. see Dutta, Tapan Kumar<sup>2</sup>, **91d:26013**

#### 42A65 Completeness of sets of functions

- Avdonin, S. A. (with Joó, István; Horváth, Miklós) Riesz bases from elements of the form  $x^k e^{i\lambda_n x}$ . **91e:42016**
- Dostanić, M. R. On the completeness of the system of function  $\{e^{-i\lambda_n x} \sin \lambda_n x\}_{n=1}^{\infty}$ . **91j:42010**
- Horváth, Miklós see Avdonin, S. A.; et al., **91e:42016**
- Joó, István see Avdonin, S. A.; et al., **91e:42016**
- Koosis, Paul Mesures orthogonales extrémales pour l'approximation pondérée par des sommes d'exponentielles imaginaires. (English summary) [Extremal orthogonal measures for weighted approximation by sums of imaginary exponentials] **91e:42010**
- Krasichkov-Ternovskii, I. F. Interpretation of the Beurling-Malliavin theorem on the radius of completeness. **91h:42011**
- Shapovalovskii, A. V. see Vinnitskii, B. V., **91i:42011**
- Vinnitskii, B. V. (with Shapovalovskii, A. V.) Completeness of systems of exponentials with weight. **91i:42011**
- Zalik, R. A. A basis of weighted exponentials. **91a:42011**

Items with secondary classifications in 42A65

- Bilalov, B. T. The basis property of some systems of exponentials of cosines and sines. **91m:41053**

#### 42A70 Trigonometric moment problems

- Cavaretta, A. S. (with Dahmen, Wolfgang; Micchelli, Charles A.) The volume of restricted moment spaces. **91d:42012**
- Dahmen, Wolfgang see Cavaretta, A. S.; et al., **91d:42012**
- Micchelli, Charles A. see Cavaretta, A. S.; et al., **91d:42012**
- Items with secondary classifications in 42A70
- Avdonin, S. A. (with Ivanov, S. A.; Joó, István) On a theorem of N. K. Bari. **91d:47018**
- Ivanov, S. A. see Avdonin, S. A.; et al., **91d:47018**
- Joó, István see Avdonin, S. A.; et al., **91d:47018**
- Khudaikuliev, G. see Khudai-Verenov, M. G., **91g:44007**
- Khudai-Verenov, M. G. (with Khudaikuliev, G.) On the moment problem. (Russian. English summary) **91g:44007**
- Korobov, V. I. (with Sklyar, G. M.) Time-optimality and the trigonometric moment problem. **91a:49025**
- Lenze, Burkhard (with Locher, F.) Jacobi moments and a family of special orthogonal polynomials. **91c:33014**
- Lewis, Adrian S. The convergence of entropic estimates for moment problems. **91a:41030**
- Locher, F. see Lenze, Burkhard, **91c:33014**
- Sklyar, G. M. see Korobov, V. I., **91a:49025**

#### 42A75 Classical almost periodic functions, mean periodic functions [see also 43A60]

- Amerio, Luigi Almost-periodic functions in Banach spaces. **91d:42013**
- Berg, Christian Introduction to the almost periodic functions of Bohr. **91a:42012**
- (Bohr, Harald) see Berg, Christian, **91a:42012**
- Dzhafarov, Ali S. (with Gasanov, G. M.) Some problems of almost-periodic functions with respect to the Hausdorff metric. (Russian) (see **91j:00017**)
- Gasanov, G. M. see Dzhafarov, Ali S., (**91j:00017**)

- Kohda, Atsuhito (with Shinohara, Yoshitane) On uniform limit of quasiperiodic functions. 91b:42019
- Komornik, Vilmos Density theorems for mean periodic functions, a distributional approach. 91g:42011
- Pych-Taberska, Paulina Approximation properties of the partial sums of Fourier series of some almost periodic functions. 91k:42020
- Shinohara, Yoshitane see Kohda, Atsuhito, 91b:42019

Items with secondary classifications in 42A75

- Bagchi, S. C. (with Sitaram, A.) The Pompeiu problem revisited. 91k:43013
- Berenstein, Carlos Alberto (with Struppa, Daniele C.) Complex analysis and convolution equations. (Russian) 91d:32001
- Hartman, S. A new class of particular sets revisited. (Italian summary) 91k:43014
- Sitaram, A. see Bagchi, S. C., 91k:43013
- Struppa, Daniele C. see Berenstein, Carlos Alberto, 91d:32001
- Tarkhov, D. A. Integration of almost periodic functions and infinite-dimensional theory of Diophantine approximation. 91m:11058

## 42A82 Positive definite functions

- Kovalishina, I. V. (with Potapov, V. P.) The triad method in the theory of extension of Hermitian positive functions. 91b:42012
- Lopotko, O. V. Integral representations of even positive-definite and related functions. 91m:42010
- Luo, Qiao Lin Maximum entropy extensions of positive definite functions. (Chinese. English summary) 91c:42017
- Potapov, V. P. see Kovalishina, I. V., 91b:42012
- Seghier, Abdellatif Extension de fonctions de type positif. Cas multidimensionnel. Application à un problème de phases en cristallographie. (English summary) [Extension of positive-type functions. Multidimensional case. Application to a phase problem in crystallography] 91h:42012

Items with secondary classifications in 42A82

- Gohberg, Israel (with Kaashoek, M. A.; Woerdeman, Hugo J.) The band method for positive and contractive extension problems. 91a:47021
- Kaashoek, M. A. see Gohberg, Israel; et al., 91a:47021
- Kuznetsova, O. M. Orthogonal decomposition of a homogeneous and isotropic random field on a Hilbert space. (Russian) 91f:60095
- Woerdeman, Hugo J. ★ Matrix and operator extensions. 91d:47001
- see also Gohberg, Israel; et al., 91a:47021

## 42A85 Convolution, factorization

- Berenstein, Carlos Alberto (with Taylor, B. Alan) Discrete approximation of deconvolution operators. 91d:42014
- Borichev, A. A. Errata: "The generalized Fourier transform, the Titchmarsh theorem and almost analytic functions". 91m:42011b
- The generalized Fourier transform, the Titchmarsh theorem and almost analytic functions. 91m:42011a
- Taylor, B. Alan see Berenstein, Carlos Alberto, 91d:42014

Items with secondary classifications in 42A85

- Baernstein, Albert, II Convolution and rearrangement on the circle. 91h:26019
- Leitanovský, Antonín Sur la norme de Fourier. IV. (Russian and Czech summaries) [On the Fourier norm. IV] 91g:60032
- Nguyen Thanh Hai (with Yakubovich, S. B.) Some two-dimensional integral transformations of convolution type. (Russian. English summary) 91e:44012
- Yakubovich, S. B. see Nguyen Thanh Hai, 91e:44012

## 42A99 None of the above, but in this section

- Björck, Göran Functions of modulus 1 on  $\mathbb{Z}$ , whose Fourier transforms have constant modulus, and "cyclic  $n$ -roots". 91k:42021
- Bouaziz, Malek Représentation intégrale de la trace d'un produit de matrices de Toeplitz finies et applications. (English summary) [Integral representation of the trace of a product of finite Toeplitz matrices and applications] 91j:42011
- Galeev, E. M. Kolmogorov diameters of classes of periodic functions of one and several variables. 91b:42013
- Gorbaichuk, V. I. (with Kharkevich, Yu. I.) Complete asymptotics of an upper bound on the deviation of quasismooth functions from their biharmonic Poisson integral. (Russian) 91c:42017
- Kharkevich, Yu. I. see Gorbaichuk, V. I., 91c:42017
- Leibov, M. V. Convergence of conditional means in the norm of the BMO space. 91b:42020

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- Drozd, V. V. Best simultaneous approximation of functions and their  $(\nu, \beta)$ -derivatives. (Russian) 91k:41034
- Dutta, Tapan Kumar<sup>2</sup> (with Mukhopadhyay, S. N.) On Riemann summable trigonometric series. 91m:26009
- Mukhopadhyay, S. N. see Dutta, Tapan Kumar<sup>2</sup>, 91m:26009

## 42Bxx Fourier analysis in several variables {For automorphic theory, see mainly 11F30.}

(Gamkrelidze, R. V.) see Current problems in mathematics. Fundamental directions, 91b:42021

Items listed otherwise than by author

- Current problems in mathematics. Fundamental directions ★ Современные проблемы математики. Фундаментальные направления. Том 15. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 15] 91b:42021
- Inogi Nanki i Tekhniki ★ Современные проблемы математики. Фундаментальные направления. Том 15. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 15] 91b:42021

## 42B05 Fourier series and coefficients

- Alimov, Sh. A. (with Ashurov, R. R.; Pulatov, A. K.) Multiple series and Fourier integrals. (Russian) 91b:42022
- Apetova, T. V. On strong Abel-Poisson means. (Russian) 91b:42023
- Ashurov, R. R. (with Metvali, A. A.) Conditions for the localization of triangular partial sums of a double trigonometric Fourier series. (Russian) 91a:42013
- Conditions for the localization of quadratic partial sums of a multiple trigonometric Fourier series in classes of S. M. Nikol'skii. 91a:42014
- see also Alimov, Sh. A.; et al., 91b:42022
- Baszenski, Günter (with Delvos, Franz-Jürgen) A discrete Fourier transform scheme for Boolean sums of trigonometric operators. 91b:42024
- Bitsadze, M. G. Trigonometric series with monotone coefficients. (Russian. English and Georgian summaries) (Not in MR)
- Bioshanski, I. L. A multiple integral and a multiple Fourier series when the summation is by squares. 91b:42025
- Carbery, Anthony (with Soria, Fernando) Almost-everywhere convergence of Fourier integrals for functions in Sobolev spaces, and an  $L^2$ -localisation principle. 91d:42015
- Chen, Tian Ping Generalized Bochner-Riesz means of Fourier integrals. 91c:42018
- Delvos, Franz-Jürgen see Baszenski, Günter, 91b:42024
- D'yachenko, M. I. Multiple trigonometric series with lexicographically monotone coefficients. (Russian summary) 91k:42022
- Ferdusi, Razina On the Borel summability of double Fourier series. 91b:42026
- Getsadze, R. D. Divergence in measure of general multiple orthogonal Fourier series. (Russian) 91b:42027
- Kislyakov, S. V. Uniformly converging double Fourier series. (Russian. English summary) 91k:42023
- Kidilashvili, D. V. On the Hardy transformation of Fourier coefficients of a multidimensional function. 91m:42012
- Konyagin, S. V. Transpositions of functions and divergence of Fourier series on cubes. (Russian) 91c:42019
- Metvali, A. A. see Ashurov, R. R., 91a:42013
- Móricz, Ferenc On the maximum of the rectangular partial sums of double trigonometric series with nonnegative coefficients. (Russian summary) 91b:42028
- (with Shi, Xian Liang) Strong uniform approximation by double Fourier series. 91b:42029
- Novikova, A. K. Approximation of solutions of some boundary value problems in mathematical physics by means of linear methods. (Russian) 91d:42016
- Pandzhikidze, L. K. Convergence of multiple conjugate trigonometric series in the space  $C(R_n)$  and the continuity of conjugate functions of several variables. (Russian. English and Georgian summaries) 91c:42020
- Pulatov, A. K. see Alimov, Sh. A.; et al., 91b:42022
- Pych-Taberska, Paulina On the rate of convergence of double Fourier series. 91b:42030
- Rakhimov, A. A. Almost everywhere convergence of Fourier-Laplace series on the sphere. (Russian) (see 91j:00010)
- Schmeisser, Hans-Jürgen (with Sickel, Winfried) Characterization of periodic function spaces via means of Abel-Poisson and Bessel-potential type. 91e:42018
- Shi, Xian Liang see Móricz, Ferenc, 91b:42029
- Sickel, Winfried see Schmeisser, Hans-Jürgen, 91e:42018
- Soria, Fernando see Carbery, Anthony, 91d:42015
- Tkebuchava, G. E. Divergence of multiple Fourier series with respect to bases. 91e:42019
- Wang, Kun Yang On the approximation of  $L^2$ -functions by their spherical Fourier sums on set of full measure. 91h:42013
- Wang, Shi Ming Convergence problems for the Fejér sum of Bochner-Riesz means of multiple Fourier series and their conjugate series. (Chinese. English summary) 91b:42031
- A class of maximal operators of Bochner-Riesz means of multiple Fourier series on fractional integral spaces. (Chinese. English summary) 91d:42017
- Yanushauskas, A. I. A method for summing multiple trigonometric series. 91a:42015
- Zaderer, P. V. Asymptotic equalities for integrals of the absolute value of the sum of a multiple sine series. (Russian. English summary) 91d:42018
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- Aminov, Yu. A. A uniqueness theorem for curves in  $E^3$ -trigonometric polynomials. (Russian) 91c:53001
- Coquand, Thierry (with Stolzenberg, Gabriel) The Wiener lemma and certain of its generalizations. 91k:46051
- Görzénka, Maria On absolute convergence of a series of Fourier-Vilenkin coefficients for functions of several variables. 91m:42026
- Matos, Mário C. Errata: "On holomorphy in Banach spaces and absolute convergence of Fourier series" [Portugal. Math. 45 (1988), no. 4, 429-450; MR 90f:46075]. 91j:46054
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- Révész, Szilárd Gy. On the convergence of Fourier series of U.A.P. functions. 91m:42029
- Stolzenberg, Gabriel see Coquand, Thierry, 91k:46051

## 42B08 Summability

- Berchyan, O. Ya. Transformations of Fourier coefficients. (Russian. English and Georgian summaries) 91j:42012
- Israilova, M. M. Order of approximation of Riesz means of  $k$ -times differentiated multiple conjugate trigonometric series by functions whose smoothness measure is given. (Russian. Tajiki summary) 91k:42024

- Izralova, M. M. On the rate of summation by Riesz and Cesàro methods of  $k$ -times differentiated double Fourier series. (Russian. Tajiki summary) **91k:42025**
- Nakhman, A. D. Generalized de la Vallée-Poussin means for multiple Fourier series. **91m:42013**
- Nosenko, Yu. L. Regularity of Bernstein-Rogosinski type means of double Fourier series. (Russian) (see **91j:00017**)
- Petrovich, A. Yu. Summability by the Abel method of generalized multiple Fourier series. **91c:42021**
- Prestini, Elena. Convolution with oscillating kernels: Bochner-Riesz and spherical partial sums operators. (Italian summary) **91m:42014**

## 42B10 Fourier and Fourier-Stieltjes transforms and other transforms of Fourier type

- Benedetto, John J. (with Benke, G.; Evans, Ward Rees) An  $n$ -dimensional Wiener-Plancherel formula. **91b:42014**
- Benke, G. see Benedetto, John J.; et al., **91h:42014**
- Cowling, Michael (with Mauceri, Giancarlo) Surface measures—maximal functions and Fourier transforms. **91h:42015**
- Evans, Ward Rees see Benedetto, John J.; et al., **91h:42014**
- Feichtinger, Hans G. (with Gröchenig, Karlheinz) Multidimensional irregular sampling of band-limited functions in  $L^p$ -spaces. **91a:42016**
- Gencher, T. G. (with Heinig, Hans P.) The Paley-Wiener theorem with general weights. **91j:42013**
- Gröchenig, Karlheinz see Feichtinger, Hans G., **91a:42016**
- Heinig, Hans P. (with Sinnamon, Gordon J.) Fourier inequalities and integral representations of functions in weighted Bergman spaces over tube domains. **91d:42019**
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- Lieb, Elliott H. Gaussian kernels have only Gaussian maximizers. **91b:42014**
- Mauceri, Giancarlo see Cowling, Michael, **91h:42015**
- Mockenhaupt, Gerd On radial weights for the spherical summation operator. **91e:42020**
- Rubin, B. S. Fourier analysis of radial-spherical convolutions in  $\mathbb{R}^n$ . II. **91e:42021**
- Saal, Linda V. A result about the Hilbert transform along curves. **91d:42020**
- Sinnamon, Gordon J. see Heinig, Hans P., **91d:42019**
- Strichartz, Robert S. Uncertainty principles in harmonic analysis. **91a:42017**
- Fourier asymptotics of fractal measures. **91m:42015**
- Strömberg, Jan-Olov (with Wheeden, Richard L.) Weighted norm estimates for the Fourier transform with a pair of weights. **91d:42014**
- Ustina, F. Some results on double Fourier-Stieltjes transform. **91c:42022**
- Wheeden, Richard L. see Strömberg, Jan-Olov, **91d:42014**

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- Allimov, Sh. A. (with Ashurov, R. R.; Pulatov, A. K.) Multiple series and Fourier integrals. (Russian) **91b:42022**
- Ashurov, R. R. see Allimov, Sh. A.; et al., **91b:42022**
- Asmar, Nakhle Habib (with Merryfield, Kent G.) On the inversion of Fourier transforms. **91d:43012**
- Baszanski, Günter (with Delvos, Franz-Jürgen) A discrete Fourier transform scheme for Boolean sums of trigonometric operators. **91b:42024**
- Benedetto, John J. Uncertainty principle inequalities and spectrum estimation. **91f:42010**
- Berenstein, Carlos Alberto (with Gay, R.; Yger, Alain) Inversion of the local Pompeiu transform. **91g:44004**
- Bhatia, Rajendra (with Davis, Chandler; Koosis, Paul) An extremal problem in Fourier analysis with applications to operator theory. **91a:42006**
- Braun, Rüdiger W. (with Meise, Reinhold; Taylor, B. Alan) Ultradifferentiable functions and Fourier analysis. **91h:46072**
- Chiarenza, Filippo (with Frasca, Michele) A remark on a paper by C. Fefferman: "The uncertainty principle" [Bull. Amer. Math. Soc. (N.S.) **9** (1983), no. 2, 129–206; MR 85f:35001]. **91a:46030**
- Davis, Chandler see Bhatia, Rajendra; et al., **91a:42006**
- Delvos, Franz-Jürgen see Baszanski, Günter, **91b:42024**
- Dostál, Miloš (with Gaveau, Bernard) The Fourier transform of certain convex bodies. (French summary) **91g:41036**
- (Fefferman, Charles L.) see Chiarenza, Filippo, **91a:46030**
- Frasca, Michele see Chiarenza, Filippo, **91a:46030**
- Gaveau, Bernard see Dostál, Miloš, **91g:41036**
- Gay, R. see Berenstein, Carlos Alberto; et al., **91g:44004**
- Hörmander, Lars ★ The analysis of linear partial differential operators. I. **91m:35001a**
- ★ The analysis of linear partial differential operators. I. **91m:35001b**
- Koosis, Paul see Bhatia, Rajendra; et al., **91a:42006**
- Kuo, Hui-Hsiung The Fourier transform in white noise calculus. **91d:60099**
- Liu, Xing Quan see Zhou, Xiao Zhong, **91e:42014**
- Meise, Reinhold see Braun, Rüdiger W.; et al., **91h:46072**
- Merryfield, Kent G. see Asmar, Nakhle Habib, **91d:43012**
- Ostrogorski, Tatjana Weighted  $H^p$  spaces on homogeneous halfplanes. **91e:46034**
- Pulatov, A. K. see Allimov, Sh. A.; et al., **91b:42022**
- Schmeisser, Hans-Jürgen (with Sichel, Winfried) Characterization of periodic function spaces via means of Abel-Poisson and Bessel-potential type. **91e:42018**
- Shananian, N. A. On a class of Fourier integrals. (Russian) **91a:35176**
- Sichel, Winfried see Schmeisser, Hans-Jürgen, **91e:42018**
- Sommen, F. Radon and X-ray transforms in Clifford analysis. **91b:44002**
- Steidl, Gabriele (with Tasche, Manfred) Index transforms for multidimensional discrete Fourier transforms. **91d:65221**
- Tasche, Manfred see Steidl, Gabriele, **91d:65221**
- Taylor, B. Alan see Braun, Rüdiger W.; et al., **91h:46072**
- Watson, David K. Weighted estimates for singular integrals via Fourier transform estimates. **91h:42035**
- Yger, Alain see Berenstein, Carlos Alberto; et al., **91g:44004**
- Zhou, Xiao Zhong (with Liu, Xing Quan) A note on derivatives of functions and their Fourier transforms in  $L_p$ . **91e:42014**

## 42B15 Multipliers

- Duoandikoetxea, Javier (with Moyua Pinillos, Adela) Homogeneous Fourier multipliers in the plane. **91b:42015**
- Moyua Pinillos, Adela see Duoandikoetxea, Javier, **91b:42015**
- Segovia, Carlos (with Torrea Hernández, José Luis) Extrapolation for pairs of related weights. **91e:42022**
- Torrea Hernández, José Luis see Segovia, Carlos, **91e:42022**
- Vinogradova, G. A. On multipliers in weighted spaces. (Russian summary) **91m:42016**
- Yudin, V. A. Riesz transforms and partial derivatives. **91e:42023**
- Items with secondary classifications in 42B15
- Allimov, Sh. A. (with Ashurov, R. R.; Pulatov, A. K.) Multiple series and Fourier integrals. (Russian) **91b:42022**
- Ashurov, R. R. see Allimov, Sh. A.; et al., **91b:42022**
- Bożejko, Marek Remark on Walter's inequality for Schur multipliers. **91a:47037**
- Cazzaniga, Franco A remark on zonal multipliers on  $L^p(\Sigma_n)$  which vanish at infinity. (Italian summary) **91e:43006**
- Cowling, Michael (with Mauceri, Giancarlo) Surface measures—maximal functions and Fourier transforms. **91h:42015**
- Dziubański, Jacek A remark on a Marcinkiewicz-Hörmander multiplier theorem for some nondifferential convolution operators. **91a:43002**
- Guo, Kang Hui A new proof of the convolution theorem via the real interpolation theorem of multilinear operators. **91f:47048**
- Mauceri, Giancarlo see Cowling, Michael, **91h:42015**
- Meyer, Martin Une classe d'espaces fonctionnels de type BMO. Application aux intégrales singulières. [A class of function spaces of type BMO. Application to singular integrals] **91b:42017**
- Mockenhaupt, Gerd On radial weights for the spherical summation operator. **91e:42020**
- Pulatov, A. K. see Allimov, Sh. A.; et al., **91b:42022**
- Rubin, B. S. Radial-spherical convolution operators in weighted  $L_p$  spaces. (Russian) **91b:47117**
- Fourier analysis of radial-spherical convolutions in  $\mathbb{R}^n$ . II. **91e:42021**
- Solomonik, V. A. Estimates for solving some noncoercive initial-boundary value problems by means of a theorem on multipliers in Fourier-Laplace integrals. (Russian) **91d:35004**
- Zimmermann, Frank On vector-valued Fourier multiplier theorems. **91b:46031**

## 42B20 Singular integrals (Calderón-Zygmund, etc.)

- Abdullaev, F. A. Some properties of a multiple singular integral with a Hilbert kernel in the language of partial and mixed moduli of continuity. (Russian) (see **91a:45007**)
- Carbery, Anthony (with Christ, Michael; Vance, James; Wainger, Stephen; Watson, David K.) Operators associated to flat plane curves:  $L^p$  estimates via dilation methods. **91m:42017**
- Chen, Jie Cheng (with Xu, Han) On  $L^2$ -boundedness of singular integral with oscillating kernel. (Chinese summary) **91j:42014**
- Christ, Michael see Carbery, Anthony; et al., **91m:42017**
- D'yachkov, A. M. Asymptotics of singular integrals of convolution type. (Russian) (see **91j:00017**)
- Dyn'kin, E. M. Methods of the theory of singular integrals (the Hilbert transform and Calderón-Zygmund theory). (Russian) (see **91b:42021**)
- Methods of the theory of singular integrals. II. The Littlewood-Paley theory and its applications. (Russian) **91j:42015**
- Epperson, Jay B. The hypercontractive approach to exactly bounding an operator with complex Gaussian kernel. **91h:42016**
- Guliev, V. S. Parabolic singular integral operators in spaces of summable functions. (Russian) (see **91a:45007**)
- Jones, Peter Wilcox Square functions, Cauchy integrals, analytic capacity, and harmonic measure. **91h:42032**
- Kokilashvili, V. M. (with Krbeć, M.) Carleson measures and  $A_p$  weights in Orlicz spaces. (Russian and Georgian summaries) **91k:42026**
- Krbeć, M. see Kokilashvili, V. M., **91k:42026**
- (Kumze, Ray A.) see Stein, Elias M., **91b:42033**
- Kustov, Yu. A. Cubature formulas with the  $m$ -property for singular integrals. (Russian) (see **91a:45007**)
- Lai, Qin Sheng BMO and  $H^1$  on domains. (Chinese) **91d:42021**
- Long, Rul Lin (with Nie, Fu Sheng) Extension to  $\mathbb{R}_+^{n+1}$  of singular integrals and fractional integrals. **91c:42023**
- La, Shan Zhen Calderón-Zygmund operators on weighted block spaces of Hardy type. (Chinese) (Not in MR)
- see also Xu, Zhen Ze, **91a:42018**
- Meyer, Martin Une classe d'espaces fonctionnels de type BMO. Application aux intégrales singulières. [A class of function spaces of type BMO. Application to singular integrals] **91b:42017**
- Miyachi, Akihiko Some Littlewood-Paley type inequalities and their application to the Fefferman-Stein decomposition of BMO. **91m:42018**
- Nie, Fu Sheng see Long, Rul Lin, **91c:42023**
- Semmes, Stephen Square function estimates and the  $T(b)$  theorem. **91b:42018**
- Sindut, Stanislav On an inverse problem for the normal singular integrals. **91e:42024**
- Slavin, Charles P. Poisson integrals and singular weights. **91h:42019**
- Stein, Elias M. ★ Problems in harmonic analysis related to oscillatory integrals and curvature. **91b:42033**
- Tran-Oberlé, Chantal Analyse non linéaire de l'opérateur défini par l'intégrale de Cauchy. (English summary) [Nonlinear analysis of the operator defined by the Cauchy integral] **91h:42034**
- Uchiyama, Akihito Corrigendum to: "The singular integral characterization of  $H^p$  on simple martingales" [Proc. Amer. Math. Soc. **88** (1983), no. 4, 617–621; MR 85c:42020]. **91d:42022**
- Vance, James see Carbery, Anthony; et al., **91m:42017**
- Vasil'ev, V. B. Boundary properties of multidimensional singular integrals and the geometry of nonsmooth domains. (Russian) (see **91a:45007**)



- Wainger, Stephen *see* Carbery, Anthony; et al., 91m:42017
- Watson, David K. Weighted estimates for singular integrals via Fourier transform estimates. 91b:42035
- *see also* Carbery, Anthony; et al., 91m:42017
- Wilson, J. Michael Weighted norm inequalities for the continuous square function. 91e:42025
- Erratum to: "Weighted norm inequalities for the continuous square function" [Trans. Amer. Math. Soc. 314 (1989), no. 2, 661–692; MR 91e:42025]. 91e:42026
- Xu, Han *see* Chen, Jie Cheng, 91j:42014
- Xu, Zhen Ze (with Lu, Shan Zhen) A class of estimates of conjugate Bochner-Riesz means on  $H^p(T^n)$  at the critical index. (Chinese. English summary) 91a:42018
- Zhu, Xue Xian On a singular integral on product spaces. 91f:42015
- Calderón-Zygmund operators on product spaces:  $H^p$  ( $0 < p \leq 1$ ) boundedness. (Chinese. English summary) 91d:42023
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- Astala, Kari Cauchy-integrals, Lipschitz-classes and Hausdorff-dimension. 91c:30078
- Bloom, Steven An interpolation theorem with  $A_p$ -weighted  $L^p$  spaces. 91g:46033
- Chang, Der-Chen E. An application of Ricci-Stein theorem to estimates of the C-R equations. 91g:32017
- Chang, Wen-Dong Boundedness of the Calderón-Zygmund singular integral operators on Ba spaces. 91h:47051
- David, Guy (with Semmes, Stephen) Strong  $A_\infty$  weights, Sobolev inequalities and quasiconformal mappings. 91c:30037
- Feinstein, J. F. Weak  $(F)$ -amenability of  $R(X)$ . 91h:46092
- Grafakos, Loukas Weak type estimates for a singular convolution operator on the Heisenberg group. 91h:43006
- Kokilashvili, V. M. Anisotropic potentials and singular integrals with a weak singularity on curves. (Russian. English and Georgian summaries) 91h:46028
- Nagel, A. (with Ricci, Fulvio; Stein, Elias M.) Harmonic analysis and fundamental solutions on nilpotent Lie groups. 91m:22016
- Parlov, E. A. A class of singular integral operators. (Russian. Ukrainian summary) 91m:47075
- Ricci, Fulvio *see* Nagel, A.; et al., 91m:22016
- Schneider, Reinhold Nonclassical multidimensional singular integral operators on  $\mathbb{R}^{n+1}_+$ . 91a:47068
- Selvaggi, Renata (with Sisto, Irene) Parabolic singular integral operators on the surface of a  $C^1$ -cylinder. 91f:47072
- Semmes, Stephen *see* David, Guy, 91c:30037
- Sisto, Irene *see* Selvaggi, Renata, 91f:47072
- Soltani, A. Reza On the continuity of Hardy-Littlewood maximal operator, Hilbert transform and the  $A_{p,q}$  condition. 91h:42039
- Stein, Elias M. *see* Nagel, A.; et al., 91m:22016
- Tchamitchian, Philippe Biorthogonalité et théorie des opérateurs. [Biorthogonality and operator theory] 91g:42014
- Thangavelu, S. Littlewood-Paley-Stein theory on  $C^*$  and Weyl multipliers. 91m:42020
- Torres, Rodolfo H. Boundedness results for operators with singular kernels on distribution spaces. 91g:47044
- Tozoni, Sergio A. Vector singular integral operators on a local field. 91b:43011
- Wed, Janusz Singular integrals and second-order stationary sequences. 91c:47060
- Yousfi, Abdellah Continuité-Besov des opérateurs définis par des intégrales singulières. (English summary) [Besov continuity of operators defined by singular integrals] 91a:47069

#### 42B25 Maximal functions, Littlewood-Paley theory

- Andersen, Kenneth F. Weighted inequalities for maximal functions associated with general measures. 91k:42027
- Bagby, Richard J. Weak bounds for the maximal function in weighted Orlicz spaces. 91k:42028
- Bloom, Steven Sharp weights and BMO-preserving homeomorphisms. 91c:42024
- Carbery, Anthony (with Hernández, Eugenio; Soria, Fernando) The behaviour on radial functions of maximal operators along arbitrary directions and the Kakeya maximal operator. 91a:42019a
- (with Hernández, Eugenio; Soria, Fernando) Erratum: "The behaviour on radial functions of maximal operators along arbitrary directions and the Kakeya maximal operator". 91a:42019b
- Chen, Lung-Kee (with Lin, Henry) A maximal operator related to a class of singular integrals. 91h:42020
- Ding, Yong Weighted weak type Hardy's inequalities. (Chinese summary) 91b:42036
- Factorization of  $S_p$  weight pairs. (Chinese. English summary) 91j:42016
- Drury, S. W. Degenerate curves and harmonic analysis. 91h:42021
- Fiorenza, Alberto A note on the spherical maximal function. (Italian summary) 91f:42016
- Franciosi, Michelangelo On weak reverse integral inequalities for mean oscillations. 91k:42029
- Fujii, Nobuhiko A proof of the Fefferman-Stein-Strömberg inequality for the sharp maximal functions. 91h:42022
- Gabidashvili, M. A. Weighted inequalities for anisotropic potentials. (Russian. English summary) 91c:42025
- Geneshashvili, I. Z. Two-weighted inequalities for fractional maximal functions in Lorentz spaces. (Russian. English and Georgian summaries) 91h:42016
- Hernández, Eugenio Factorization and extrapolation of pairs of weights. 91c:42026
- *see also* Carbery, Anthony; et al., 91a:42019a and 91a:42019b
- Jawerth, Björn (with Pérez, Carlos; Welland, G.) The positive cone in Triebel-Lizorkin spaces and the relation among potential and maximal operators. 91m:42019
- Johnson, Raymond L. Changes of variable and  $A_p$  weights. 91f:42017
- Kokilashvili, V. M. (with Kufner, Alois) Fractional integrals on spaces of homogeneous type. 91e:42027
- Korenovskii, A. A. Membership of the maximum functions  $Mf$  and  $f^*$  in the class  $\phi(L)$ . (Russian) (see 91j:00017)
- Kufner, Alois *see* Kokilashvili, V. M., 91e:42027
- Lai, Qin Sheng Weighted weak inequalities for fractional submaximal operators on homogeneous spaces. (Chinese) 91e:42028
- Lin, Henry *see* Chen, Lung-Kee, 91h:42020
- Liu, Zong Guang Boundedness of  $A_1$  weighted bounded mean oscillation of Littlewood-Paley  $g$ -function. (Chinese. English summary) (Not in MR)
- Long, Rui Lin (with Shen, Zhong Wei) A note on a covering lemma of A. Cordoba and R. Fefferman. 91b:42037
- Luo, Cheng Convergence and  $L^p$ -boundedness for a class of operators. (Chinese. English summary) 91e:42029
- Ma, Ji Gang The Littlewood-Paley theorem in Ba spaces. (Chinese) 91a:42020a
- Littlewood-Paley theorem in the Ba spaces. 91a:42020b
- Müller, Detlef A geometric bound for maximal functions associated to convex bodies. 91b:42038
- Pérez, Carlos *see* Jawerth, Björn; et al., 91m:42019
- Romera, Elena (with Soria, Fernando) Endpoint estimates for the maximal operator associated to spherical partial sums on radial functions. 91j:42017
- Ruiz Blasco, Francisco José (with Torrea Hernández, José Luis) Weighted norm inequalities for a general maximal operator. 91g:42013
- Shen, Zhong Wei *see* Long, Rui Lin, 91h:42037
- Soltani, A. Reza On the continuity of Hardy-Littlewood maximal operator, Hilbert transform and the  $A_{p,q}$  condition. 91h:42039
- Soria, Fernando *see* Carbery, Anthony; et al., 91a:42019a; 91a:42019b and Romera, Elena, 91j:42017
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- Miyachi, Akihiko Some Littlewood-Paley type inequalities and their application to the Fefferman-Stein decomposition of BMO. 91m:42018
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- Burbea, J. see Beatrous, F., 91e:46038
- Chao, J.-A. (with Daly, J. E.; Ombe, H.) Factorizations of Hardy spaces of simple martingales. 91a:60122
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- Feldman, Mark (with Rochberg, Richard) Singular value estimates for commutators and Hankel operators on the unit ball and the Heisenberg group. 91e:47024
- Gilbert, John E. (with Murray, Margaret A. M.)  $H^p$ -theory on Euclidean space and the Dirac operator. 91c:30094
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- Schipp, Ferenc On equivalence of rearrangements of the Haar system in dyadic Hardy and BMO spaces. 91d:42029
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- Tran-Oberlé, Chantal Analyse non linéaire de l'opérateur défini par l'intégrale de Cauchy. (English summary) [Nonlinear analysis of the operator defined by the Cauchy integral] 91h:42034
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- Carlen, Eric A. (with Loss, Michael) Extremals of functionals with competing symmetries. 91e:42021
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- Romanyuk, A. S. Approximation of classes  $B_{p,p}^s$  of periodic functions of several variables in the space  $L_q$ . (Russian) 91i:42018
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- Fomenko, A. V. Multidimensional trigonometric interpolation. 91f:41002
- Gabisoniya, O. D. ★ Вопросы теории приближения функций многих действительных переменных. (Russian) [Problems in the theory of approximating functions of several real variables] 91k:41054
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- Alfaro, Manuel (with Estrada, Asunción) A parametric sequence for orthogonal polynomials on the unit circle. (Spanish. English summary) (see 91m:00037)
- Baudry, William C. Estimates of asymmetric Freud polynomials. 91k:42030
- Benrune, R. see Kallagune, V., 91f:42025
- De Bruin, Marcel G. Polynomials orthogonal on a circular arc. 91k:42031
- Cachafeiro López, Ma. Alicia (with Marcellán, Francisco) The characterization of the quasi-typical extension of an inner product. 91m:42024
- Dehesa, Jesús S. (with Gálvez, F. J.) Global properties of the zeros of orthogonal polynomials. (Spanish) (see 91m:00037)
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- Gerónimo, Jeffrey S. (with Van Assche, Walter) Relative asymptotics for orthogonal polynomials with unbounded recurrence coefficients. 91f:42022
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- Golub, A. P. Some properties of bi-orthogonal polynomials. 91e:42023
- Grishpan, Z. S. Differential equations of orthogonal Bernstein-Szegő polynomials. 91e:42024
- Guadalupe García, Rafael (with Torrano, Emilio; Vinuesa Tejedor, Jaime) The numerical range of Hessenberg's matrix associated with a sequence of orthogonal polynomials on a curve or on a subset of the complex plane. (see 91j:41001)
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- Kallagune, V. (with Benzine, R.) Sur la formule asymptotique des polynômes orthogonaux associés à une mesure concentrée sur un contour plus une partie discrète finie. (English summary) [An asymptotic formula for orthogonal polynomials associated with a measure concentrated on a contour plus a finite discrete part] 91f:42025
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- Lubinsky, D. S. (with Saff, E. B.) Szegő asymptotics for non-Szegő weights on  $[-1, 1]$ . (see 91j:41002)
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- Marcellán, Francisco (with Moral, Leandro) Asymptotic properties of polynomials orthogonal over the Bernoulli lemniscate. (Spanish) (see 91m:00037)
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- Pfeister, Franz On Bernstein-Szegő orthogonal polynomials on several intervals. 91b:42043
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- Belmechi, S. see Rouveau, A.; et al., 91c:33016
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- Bessis, Daniel (with Geronimo, Jeffrey S.; Moussa, P.) Erratum: "Function weighted measures and orthogonal polynomials on Julia sets" [Constr. Approx. 4 (1988), no. 2, 157–173; MR 89h:58085]. 91b:58210
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- Cooper, S. Clement (with Jones, William B.; Thron, W. J.) Orthogonal Laurent-polynomials and continued fractions associated with log-normal distributions. 91b:65049
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- Rouveau, A. (with Belmechi, S.; Dini, J.; Maroni, P.) Fourth-order differential equation for the co-modified of semi-classical orthogonal polynomials. 91c:33016
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- Thakurta, B. G. Some generating functions of Jacobi polynomials. 91b:33010
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- 42C10 Fourier series in special orthogonal functions (Legendre polynomials, Walsh functions, etc.)**
- Abdullaev, K. Kh. Estimation of the Dirichlet kernels in a multiplicative Price system. (Russian) 91c:42034
- Bel'mkil, A. M. Uniform convergence of Fourier-Jacobi series on an orthogonality segment. 91f:42028
- Borisova, L. V. Necessary and sufficient conditions for convergence at a point of Fourier-Laguerre series. (Russian) (see 91j:00017)
- Bugadze, V. M. ★ Ряды Фурье-Хаара суперпозиций функций. (Russian) [Fourier-Haar series of superpositions of functions] 91k:42033
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- Changes of variable of Fourier-Haar coefficients that preserve the absolute convergence of a series. (Russian. English and Georgian summaries) 91b:42044
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- Cao, Xiang Yan Walsh expansions and Walsh-Fourier transforms for some functions. (Chinese. English summary) 91c:42030
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- Gevorgyan, G. G. Haar and Franklin series with identical coefficients. (Russian. English and Armenian summaries) 91k:42034
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- Móricz, Ferenc Walsh-Fourier series with coefficients of generalized bounded variation. 91b:42045
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- Paliwal, Y. C. (with Mishra, S. D.) Fourier series of the  $a$ -function of  $n$ -variables. (Not in MR)
- Pérez, Mario see Guadalupe Hernández, José Javier; et al., 91g:42018
- Rodin, V. A. Majorant operators of strong summation of Fourier series. 91g:42020
- Ryschenko, N. D. Approximation of functions of two variables by arithmetic means of their multiple Fourier-Walsh series. (Russian) 91c:42037
- Sargsyan, A. S. see Kazaryan, K. S., 91c:42035
- Schipp, Ferenc On equivalence of rearrangements of the Haar system in dyadic Hardy and BMO spaces. 91d:42029
- see also Móricz, Ferenc, 91b:42047 and 91d:42028
- Sinatskil, E. S. Representation of the Fourier-Chebyshev series by a rational fraction. 91j:42022



Stempak, Krzysztof Mean summability methods for Laguerre series. 91h:42025

Talalyan, An. A. Classification of  $U_p$ -sets of trigonometric integrals. (Russian. Armenian summary) 91d:42030

Tarkae, V. V. Divergence of Fourier-Walsh series. (Russian) 91a:42024

Thangavelu, S. Summability of Hermite expansions. I, II. 91b:42048

Varona, Juan L. see Guadalupe Hernández, José Javier; et al. 91g:42018

Wade, W. R. see Móricz, Ferenc; et al. 91d:42028

Zhang, Pei Xuan The Lebesgue constants of the biorthonormal system  $\{P_n, Q_n\}$  and "Jackson" type theorem for a kind of new approximation problem. 91m:42027

#### Items with secondary classifications in 42C10

Balborodov, S. P. Approximation of functions by Fourier sums in systems of characters of zero-dimensional compact commutative groups. (Russian) 91a:43005

Bajpai, S. D. (with Mishra, Sadhana) An anharmonic Fourier analysis for use in problems of heat conduction and Meijer's  $G$ -function. 91m:33022

Barone, Piero A discrete orthogonal transform based on spherical harmonics. 91m:65340

Cazzaniga, Franco A remark on zonal multipliers on  $L^p(\Sigma_n)$  which vanish at infinity. (Italian summary) 91a:43006

Dorogoshel, A. A. Approximation of analytic functions in some function spaces and rational approximation of functions in Hardy classes. (Russian. English summary) 91m:30053

Gevorkyan, G. G. Sets of relative uniqueness for trigonometric series and Walsh system series. (see 91j:00017)

Goldberg, David E. Genetic algorithms and Walsh functions. I. A gentle introduction. (Not in MR)

— Genetic algorithms and Walsh functions. II. Deception and its analysis. (Not in MR)

Gong, Sheng (with Li, Shi Xiong; Zheng, Xue An) Harmonic analysis on classical groups. 91f:33008

Lacroix, Norbert H. J. Les fonctions sphériques avec des zéros horizontaux et verticaux. (English summary) [Spherical functions with horizontal and vertical zeros] 91c:33020

Li, Shi Xiong see Gong, Sheng; et al. 91f:33008

Milovanović, Gradimir V. (with Rajković, Predrag M.) Some considerations about complex orthogonal polynomials. 91m:30007

Mishra, Sadhana see Bajpai, S. D., 91m:33022

Rajković, Predrag M. see Milovanović, Gradimir V., 91m:30007

Sagher, Yoram (with Zhou, Ke Cheng) Local norm inequalities for lacunary series. 91b:42017

Tripathi, L. M. (with Tripathi, V. N.; Yadav, S. J.) On Nörlund summability of Jacobi series. 91c:40017

Tripathi, V. N. see Tripathi, L. M.; et al. 91c:40017

Yadav, S. J. see Tripathi, L. M.; et al. 91c:40017

Zaimanov, L. A. ★ Преобразования Фурье, Уолша, Хаара и их применение в управлении, связи и других областях. (Russian) [Fourier, Walsh and Haar transforms and their application to control, communication and other fields] 91f:94001

Zheng, Xue An see Gong, Sheng; et al. 91f:33008

Zhou, Ke Cheng see Sagher, Yoram, 91b:42017

#### 42C15 Series of general orthogonal functions, generalized Fourier expansions, nonorthogonal expansions

Agrawal, S. R. see Kantawala, Pragna S.; et al. 91a:42026

Aguirre, J. (with Escobedo, M.; Peral Alonso, Juan Carlos; Tchamitchian, Philippe) Basis of wavelets and atomic decompositions of  $H^1(\mathbb{R}^n)$  and  $H^1(\mathbb{R}^n \times \mathbb{R}^n)$ . 91k:42037

Andrienko, V. A. On the rate of Cesàro summability of orthogonal series. (Russian summary) 91c:42031

Asatiani, V. O. Generalized absolute Cesàro summability of Fourier series. (Russian. English and Georgian summaries) 91k:42038

Bespalov, M. S. Properties of an operator of the multiplicative Fourier transform. (Russian) (see 91j:00017)

Bochkarev, S. V. Probabilistic method of approach to the certain problems of Fourier analysis. (see 91j:60003)

Bogmér, A. (with Horváth, Miklós; Joó, István) Notes to some papers of V. Komornik on vibrating membranes. 91b:42049

(Combes, J. M.) see Wavelets, 91h:42026

Daubechies, Ingrid The wavelet transform, time-frequency localization and signal analysis. 91c:42038

Escobedo, M. see Aguirre, J.; et al. 91k:42037

Feichtinger, Hans G. Coherent frames and irregular sampling. 91k:42039

Feig, Ephraim (with Micchelli, Charles A.)  $L^2$ -synthesis by ambiguity functions. 91a:42025

Gaposhkin, V. F. On the equivalence of classical methods of summation of orthogonal series. 91j:42023

(Grossmann, A.) see Wavelets, 91h:42026

Heil, Christopher E. (with Walnut, David F.) Continuous and discrete wavelet transforms. 91c:42032

— (with Walnut, David F.) Gabor and wavelet expansions. 91j:42024

— Wavelets and frames. 91b:42050

Horváth, Miklós see Bogmér, A.; et al. 91b:42049

Joó, István see Bogmér, A.; et al. 91b:42049

Kantawala, Pragna S. (with Agrawal, S. R.; Patel, C. M.) On Nörlund summability of orthonormal series. 91a:42026

Kashin, B. S. An analogue of Men'shov's "correction" theorem for discrete orthonormal systems. 91d:42029

Kazachek, S. A. Some classes of orthogonal polynomial series. (Russian) (see 91j:00017)

Laeng, Enrico Une base orthonormale de  $L^2(\mathbb{R})$  dont les éléments sont bien localisés dans l'espace de phase et leurs supports adaptés à toute partition symétrique de l'espace des fréquences. (English summary) [An orthonormal basis of  $L^2(\mathbb{R})$  whose elements have good phase-space localization and supports adapted to any symmetric partition of frequency space] 91h:42021

Magomedov, I. I. Absolute convergence of Fourier series in orthogonal polynomials. (Russian) (see 91j:00017)

Maravić, Manejlo On the asymptotic behaviour of the  $G_p^*$ -means of eigenfunction expansion related to the slowly oscillating functions with remainder term. 91f:42030

Meyer, Yves Orthonormal wavelets. 91a:42027

Micchelli, Charles A. see Feig, Ephraim, 91a:42025

Patel, C. M. see Kantawala, Pragna S.; et al. 91a:42026

Peral Alonso, Juan Carlos see Aguirre, J.; et al. 91k:42037

Sagher, Yoram (with Zhou, Ke Cheng) A local version of a theorem of Khinchin. 91e:42039

Stark, H.-G. Fractal graphs and wavelet series. 91c:42033

Strang, Gilbert Wavelets and dilation equations: a brief introduction. 91m:42028

Szablowski, Paweł J. A few remarks on Riesz summability of orthogonal series. 91k:42040

Szalay, I. On the strong Cesàro summability of double orthogonal expansions. 91f:42031

— On the strong convergence of orthogonal series with almost everywhere uniformly bounded orthonormal systems. 91k:42041

Talalyan, An. A. Carleman singularities and sets of uniqueness of orthonormal systems with respect to the classes  $l_p$ . (Russian. English and Armenian summaries) 91d:42031

Tchamitchian, Philippe see Aguirre, J.; et al. 91k:42037 and Wavelets, 91h:42026

Walnut, David F. see Heil, Christopher E., 91c:42032 and 91j:42024

Zhou, Ke Cheng see Sagher, Yoram, 91e:42039

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Marseille ★ Wavelets. 91h:42026

Wavelets ★ Wavelets. 91h:42026

#### Items with secondary classifications in 42C15

Argoul, F. (with Arneodo, A.; Elezgaray, J.; Grasseau, G.; Murenzi, Romain) Wavelet analysis of the self-similarity of diffusion-limited aggregates and electrodeposition clusters. 91e:82036

Arneodo, A. see Argoul, F.; et al. 91e:82036

Battle, Guy Phase space localization theorem for ondelettes. 91a:81140

Blalov, B. T. The basis property of some systems of exponentials of cosines and sines. 91m:41053

Efimov, Aleksandr Vasilievich Multiplicative function systems and their application in discrete information processing. 91m:94002

Elezgaray, J. see Argoul, F.; et al. 91e:82036

Everson, R. (with Sirovich, Lawrence; Sreenivasan, K. R.) Wavelet analysis of the turbulent jet. 91c:76061

Gaposhkin, V. F. Series of block-orthogonal and block-independent systems. 91k:42032

Grasseau, G. see Argoul, F.; et al. 91e:82036

Lawton, Wayne M. Necessary and sufficient conditions for constructing orthonormal wavelet bases. 91m:81100

Mhaskar, H. N. Approximation in certain intermediate spaces. 91g:41024

Mirzakhmedov, M. A. (with Tursunov, G. T.) Functions whose Fourier coefficients are moments of a probability distribution. (Russian) 91f:60040

Murenzi, Romain see Argoul, F.; et al. 91e:82036

Pap, Endre Sequence spaces in the theory of generalized functions and ill-posed problems. 91a:46036

Reyes, Miguel An analytic study of functions defined on self-similar fractals. 91m:28007

Sherman, Thomas O. The Helgason Fourier transform for compact Riemannian symmetric spaces of rank one. 91g:43009

Sirovich, Lawrence see Everson, R.; et al. 91c:76061

Sreenivasan, K. R. see Everson, R.; et al. 91c:76061

Tchamitchian, Philippe Biorthogonalité et théorie des opérateurs. [Biorthogonality and operator theory] 91g:42014

(Trzeciak, Jerzy) see Efimov, Aleksandr Vasilievich, 91m:94002

Tursunov, G. T. see Mirzakhmedov, M. A., 91f:60040

Zalik, R. A. A basis of weighted exponentials. 91a:42011

#### 42C20 Rearrangements and other transformations of Fourier and other orthogonal series

Giorgobiani, G. D. Convergent almost everywhere rearrangements of expansions in a series in orthogonal systems. (Russian. English and Georgian summaries) 91k:42042

Révész, Szilárd Gy. On the convergence of Fourier series of U.A.P. functions. 91m:42029

#### Items with secondary classifications in 42C20

Kadets, V. M. Rearrangements of function series and different forms of convergence. 91a:40002

Stark, H.-G. Fractal graphs and wavelet series. 91c:42033

Zaimanov, L. A. ★ Преобразования Фурье, Уолша, Хаара и их применение в управлении, связи и других областях. (Russian) [Fourier, Walsh and Haar transforms and their application to control, communication and other fields] 91f:94001

#### 42C25 Uniqueness and localization for orthogonal series

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Daubechies, Ingrid The wavelet transform, time-frequency localization and signal analysis. 91c:42038

Talalyan, An. A. Carleman singularities and sets of uniqueness of orthonormal systems with respect to the classes  $l_p$ . (Russian. English and Armenian summaries) 91d:42031

Tarkae, V. V. Divergence of Fourier-Walsh series. (Russian) 91a:42024

#### 42C30 Completeness of sets of functions

##### Items with secondary classifications in 42C30

Bogmér, A. (with Horváth, Miklós; Joó, István) Notes to some papers of V. Komornik on vibrating membranes. 91b:42049

Horváth, Miklós *see* Bogmér, A.; et al., 91b:42049  
 Jód, István *see* Bogmér, A.; et al., 91b:42049

#### 42C99 None of the above, but in this section

Kazaryan, K. S. On a problem of S. Banach from *The Scottish book*. 91c:42034  
 Madych, W. R. Translation invariant multiscale analysis. 91m:42030

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Gahisoniya, O. D. ★ Вопросы теории приближения функций многих действительных переменных. (Russian) [Problems in the theory of approximating functions of several real variables] 91k:41054  
 Jones, Peter Wilcox Rectifiable sets and the traveling salesman problem. 91h:26016  
 Lardet, Pierre Some metric properties of subsequences. 91h:11091  
 Mossé, Brigitte  $q$ -adic spectral analysis of some arithmetic sequences. 91d:11090  
 Sher, A. P. The Walsh transform with an arbitrary order of transforms. (Russian) 91m:94006  
 Tazabekov, S. Embedding of the classes  $E_p(\lambda)$ , formed with respect to a Haar-type system, into the Marcinkiewicz space. (Russian) 91m:46043

### 43-XX Abstract harmonic analysis {For other analysis on topological and Lie groups, see 22Exx.}

#### 43-02 Research exposition (monographs, survey articles)

Berglund, John F. (with Junghenn, Hugo D.; Milnes, Paul) ★ Analysis on semigroups. 91b:43001

Junghenn, Hugo D. *see* Berglund, John F.; et al., 91b:43001  
 Milnes, Paul *see* Berglund, John F.; et al., 91b:43001  
 Pier, Jean-Paul ★ L'analyse harmonique. (French) [Harmonic analysis] 91f:43001  
 Rudin, Walter ★ Fourier analysis on groups. 91b:43002

Items with secondary classifications in 43-02

Khavin, V. P. Methods and structure of commutative harmonic analysis. (Russian) (*see* 91b:42021)

#### 43-03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 43-03

Pier, Jean-Paul ★ L'analyse harmonique. (French) [Harmonic analysis] 91f:43001

#### 43-06 Proceedings, conferences, collections, etc.

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(Grinberg, Eric) *see* Integral geometry and tomography, 91m:00032  
 (Quinto, Eric Todd) *see* Integral geometry and tomography, 91m:00032

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 Integral Geometry and Tomography ★ Integral geometry and tomography. 91m:00032  
 Contemporary Mathematics ★ Integral geometry and tomography. 91m:00032  
 Integral geometry and tomography ★ Integral geometry and tomography. 91m:00032

#### 43A05 Measures on groups and semigroups, etc.

Asmar, Nakhle Habib A note on analytic measures. 91g:43001  
 Dekken, Douglas Paul  $\mu$ -harmonic functions on locally compact groups. 91k:43001  
 van Douwen, Eric K. Measures invariant under actions of  $F_2$ . 91b:43003  
 Håkonsen, Göran A note on the semigroup of analytic mappings with a common fixed point. 91d:43001  
 Khokhlov, Yu. S. Stable distributions on the Heisenberg group. 91e:43001  
 Riaz, Abdolhamid On compact semigroups and their semigroups of probability measures. 91e:43002  
 Siebert, Eberhard Semistable convolution semigroups and the topology of contraction groups. 91h:43004  
 Tserpes, N. A. A note on quasi  $R^*$ -invariant measures on semigroups. 91h:43001  
 Vrem, Richard C.  $L^p$ -improving measures on hypergroups. 91a:43001  
 Yamaguchi, Hiroshi The F. and M. Riesz theorem on certain transformation groups. II. 91h:43001

Items with secondary classifications in 43A05

Born, Elke An explicit Lévy-Hinčin formula for convolution semigroups on locally compact groups. 91a:60023  
 Cartwright, Donald I. On the asymptotic behaviour of convolution powers of probabilities on discrete groups. 91a:60024  
 Cerrito, P. B. A complete characterization of stochastic processes defined on regular semigroups with applications to stochastic models. 91h:60009  
 Coulhon, Thierry (with Saloff-Coste, Laurent) Puissances d'un opérateur régularisant. (English summary) [Powers of a regularizing operator] 91j:43002

— (with Saloff-Coste, Laurent) Marches aléatoires non symétriques sur les groupes unimodulaires. (English summary) [Nonsymmetric random walks on unimodular groups] 91j:43003

Dani, S. G. (with McCrudden, M.) Embedding infinitely divisible probabilities on the affine group. 91b:60010  
 Gabrielyan, S. S. The Cauchy distribution on abelian groups. (Russian. English summary) 91m:60018

Hazard, W. On the decomposability group of a convolution semigroup. 91d:60014  
 McCrudden, M. *see* Dani, S. G., 91b:60010  
 Parreau, François Measures with real spectra. 91f:43004  
 — Ergodicité et pureté des produits de Riesz. (English summary) [Ergodicity and purity of Riesz products] 91g:42009

Racher, Svetlozar T. (with Yukich, J. E.) Smoothing metrics for measures on groups. (French summary) 91g:60014

Saloff-Coste, Laurent *see* Coulhon, Thierry, 91j:43002 and 91j:43003  
 Székely, Gábor J. (with Zeng, Wei Bin) The Choquet-Deny convolution equation  $\mu = \mu * \sigma$  for probability measures on abelian semigroups. 91e:60025

Urbansk, K. Quasi-regular generalized convolutions. 91d:60035  
 Ylönen, Kari Position and momentum as spectral measures on locally compact abelian groups. (*see* 91i:81005)

Yukich, J. E. *see* Racher, Svetlozar T., 91g:60014  
 Zeng, Wei Bin *see* Székely, Gábor J., 91e:60025  
 Zimpel, Zbigniew Invariant Markov processes on compact groups and correlation functions. 91k:60017

#### 43A07 Means on groups, semigroups, etc.; amenable groups

Ayyaswamy, S. K. (with Ramakrishnan, P. V.) Left uniformly continuous functions of topological semigroups and certain amenability results. 91g:43002  
 Chojnacki, Wojciech On some totally ergodic functions. 91f:43002  
 Duncan, John (with Paterson, Alan L. T.) Amenability for discrete convolution semigroup algebras. 91m:43001  
 Huang, Yung Yü Amenable semigroups and densities. 91e:43003  
 — The space of almost convergent functions and its multipliers on a semigroup. 91k:43002  
 Lau, Anthony To Ming Amenability of semigroups. 91k:43003  
 — (with Paterson, Alan L. T.) Inner amenable locally compact groups. 91h:43002  
 Lust-Piquard, Françoise Moyennes sur  $CV_p(G)$ ; sous espaces  $CV_p(E)$  lorsque  $E$  est un compact dénombrable. [Means on  $CV_p(G)$ ;  $CV_p(E)$ -subspaces when  $E$  is a countable compact subset] (*see* 91m:46002)  
 — Means on  $CV_p(G)$ -subspaces of  $CV_p(G)$  with RNP and Schur property. (French summary) 91d:43002

Nebbia, Claudio A note on the amenable subgroups of  $PSL(2, \mathbb{R})$ . 91b:43002  
 Paterson, Alan L. T. Invariant subspace theorems for amenable groups. 91j:43001  
 — *see also* Lau, Anthony To Ming, 91h:43002 and Duncan, John, 91m:43001  
 Ramakrishnan, P. V. *see* Ayyaswamy, S. K., 91g:43002  
 Riaz, Abdolhamid Topological invariant means on locally compact semigroups. 91g:43003  
 Rosenblatt, Joseph (with Yang, Zhuoqun) Functions with a unique mean value. 91f:43003

Sakai, Koichi Some remarks on extremely amenable algebras. 91e:43004  
 Soardi, Paolo M. (with Woess, Wolfgang) Amenability, unimodularity, and the spectral radius of random walks on infinite graphs. 91m:43002  
 Willis, George A. Probability measures on groups and some related ideals in group algebras. 91i:43003  
 Woess, Wolfgang *see* Soardi, Paolo M., 91m:43002  
 Yang, Zhuoqun *see* Rosenblatt, Joseph, 91f:43003

Items with secondary classifications in 43A07

Baskakov, A. G. Diagonalization of operators and complementability of subspaces of Banach spaces. 91k:22016  
 Bekka, Mohammed E. B. Amenable unitary representations of locally compact groups. 91g:22007  
 — Complemented subspaces of  $L^\infty(G)$ , ideals of  $L^1(G)$  and amenability. 91f:43006  
 Foreman, Matthew Amenable group actions on the integers; an independence result. 91f:53104  
 Grønbæk, Niels Amenability of discrete convolution algebras, the commutative case. 91d:43008  
 Riaz, Abdolhamid On compact semigroups and their semigroups of probability measures. 91e:43002

#### 43A10 Measure algebras on groups, semigroups, etc.

Ghahramani, F. Automorphisms of weighted measure algebras. 91c:43001  
 Kalra, Savita (with Singh, Ajit Iqbal; Vasudeva, H. L.) The algebra  $A_p((0, \infty))$  with order convolution and its multipliers. 91m:43003  
 Kim, Hee Sik *see* Kim, Jin Bai, 91m:43004  
 Kim, Jin Bai (with Kim, Hee Sik) Structure theory for a class of convolution algebras of vector-valued measures. 91k:43004  
 Lang, W. Christopher A hypergroup measure algebra that admits no analogue of the structure theorem of J. L. Taylor. 91d:43003  
 Parreau, François Measures with real spectra. 91f:43004  
 Singh, Ajit Iqbal *see* Kalra, Savita; et al., 91m:43003  
 Vasudeva, H. L. *see* Kalra, Savita; et al., 91m:43003

Items with secondary classifications in 43A10

Lau, Anthony To Ming Amenability of semigroups. 91k:43003

#### 43A15 $L^p$ -spaces and other function spaces on groups, semigroups, etc.

Alsopach, Dale E. A characterization of the complemented translation-invariant subspaces of

**$H^1(\mathbb{R})$ . 91c:43002**

- Brummelhuis, R. G. M. An F. and M. Riesz theorem for compact Lie groups. 91c:43003
- Coulhon, Thierry (with Saloff-Coste, Laurent) Puissances d'un opérateur régularisant. (English summary) [Powers of a regularizing operator] 91j:43002
- (with Saloff-Coste, Laurent) Marches aléatoires non symétriques sur les groupes unimodulaires. (English summary) [Nonsymmetric random walks on unimodular groups] 91j:43003
- Feichtinger, Hans G. (with Gürkanlı, A. Turan) On a family of weighted convolution algebras. 91m:43004
- Gaudry, Garth (with Meda, Stefano; Pini, R.) A heat semigroup version of Bernstein's theorem on Lie groups. 91j:43004
- Gürkanlı, A. Turan see Feichtinger, Hans G., 91m:43004
- Komal, B. S. see Singh, Raj Kishor; et al., 91k:43006
- Meda, Stefano see Gaudry, Garth; et al., 91j:43004
- Nilsen, Rodney Adapted sets of measures and invariant functionals on  $L^p(G)$ . 91h:43003
- Pini, R. see Gaudry, Garth; et al., 91j:43004
- Reiter, Hans ★ Metaplectic groups and Segal algebras. 91k:43005
- Saeki, Sadahiro The  $L^p$ -conjecture and Young's inequality. 91j:43005
- Saloff-Coste, Laurent see Coulhon, Thierry, 91j:43002 and 91j:43003
- Sharma, Som Datt see Singh, Raj Kishor; et al., 91k:43006
- Singh, Raj Kishor (with Sharma, Som Datt; Komal, B. S.) Translation invariant function spaces. 91k:43006

**Items with secondary classifications in 43A15**

- Asmar, Nakhle Habib Exponential estimates for the conjugate function on locally compact abelian groups. 91d:43005
- Baĭborodov, S. P. Approximation of functions by Fourier sums in systems of characters of zero-dimensional compact commutative groups. (Russian) 91a:43005
- Burns, Robert J. (with Robinson, Derek W.) Schauder estimates on Lie groups. 91m:22014
- Carey, Alan L. (with Kaniuth, Eberhard; Moran, William) The Pompeiu problem for groups. 91j:43008
- Chernov, V. G. On a function algebra. 91c:46076
- Giulini, Saverio (with Meda, Stefano) Oscillating multipliers on noncompact symmetric spaces. 91j:43010
- Kaniuth, Eberhard see Carey, Alan L.; et al., 91j:43008
- Kokilashvili, V. M. (with Kufner, Alois) Fractional integrals on spaces of homogeneous type. 91c:42027
- Krawczyk, Jarosław A remark on continuity of translation invariant functionals on  $L_p(G)$  for compact Lie groups  $G$ . 91c:43008
- Kufner, Alois see Kokilashvili, V. M., 91c:42027
- Meda, Stefano see Giulini, Saverio, 91j:43010
- Moran, William see Carey, Alan L.; et al., 91j:43008
- Robinson, Derek W. see Burns, Robert J., 91m:22014
- Unni, K. R. Translation invariant operators. 91k:43011
- Varopoulos, Nicholas Th. Sobolev inequalities on Lie groups and symmetric spaces. 91c:22020

**43A17 Analysis on ordered groups,  $H^p$ -theory**

- Akopyan, L. M. Representations of quasimaximal semigroups in a uniform algebra. (Russian. Armenian summary) 91m:43005
- Asmar, Nakhle Habib The conjugate function on the finite-dimensional torus. 91d:43004
- On a Stein and Weiss property of the conjugate function. 91b:43005
- Exponential estimates for the conjugate function on locally compact abelian groups. 91d:43005
- (with Berkson, Earl; Gillespie, Thomas Alastair) Representations of groups with ordered duals and generalized analyticity. 91f:43005
- Berkson, Earl see Asmar, Nakhle Habib; et al., 91f:43005
- Chao, J.-A. (with Taibleson, Mitchell H.) A Hilbert transform for nonhomogeneous martingales. 91d:43006
- Gillespie, Thomas Alastair see Asmar, Nakhle Habib; et al., 91f:43005
- Taibleson, Mitchell H. see Chao, J.-A., 91d:43006
- Toner, Tonia V. A Bochner type theorem for compact groups. 91d:43007
- Yu, Shu Mo Harmonic analysis of operators on a locally compact abelian group: theorems of F. and M. Riesz. (Chinese. English summary) (Not in MR)

**Items with secondary classifications in 43A17**

- Asmar, Nakhle Habib A note on analytic measures. 91g:43001

**43A20  $L^1$ -algebras on groups, semigroups, etc.**

- Bekka, Mohammed E. B. Complemented subspaces of  $L^\infty(G)$ , ideals of  $L^1(G)$  and amenability. 91f:43006
- Ghahramani, F. (with McClure, J. P.; Grabiner, Sandy) Standard homomorphisms and regulated weights on weighted convolution algebras. 91k:43007
- Grabiner, Sandy Semigroups and the structure of weighted convolution algebras. 91c:43004
- see also Ghahramani, F.; et al., 91k:43007
- Grombæk, Niels Amenability of discrete convolution algebras, the commutative case. 91d:43008
- Hedenmalm, Håkan Translates of functions of two variables. 91k:43008
- Johnson, B. E. Weak amenability of group algebras of connected complex semisimple Lie groups. 91k:43009
- McClure, J. P. Derivations of convolution algebras. 91c:43005
- see also Ghahramani, F.; et al., 91k:43007
- Medgachi, A. R. Weighted hypergroup algebras as an ideal in its second dual space. 91f:43007
- Moran, William (with Willis, George A.) Boundaries and modular ideals on locally compact groups. 91j:43006
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#### 43A90 Spherical functions [see also 22E45, 22E46, 33C65, 33D55]

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- Giulini, Saverio (with Meda, Stefano) Oscillating multipliers on noncompact symmetric spaces. 91g:43010
- Meda, Stefano *see* Giulini, Saverio, 91g:43010
- Oshima, Toshio Asymptotic behavior of spherical functions on semisimple symmetric spaces. 91c:22018
- A realization of semisimple symmetric spaces and construction of boundary value maps. 91c:22019
- Richards, Donald St. P. The central limit theorem on spaces of positive definite matrices. 91a:60031
- Szwarc, Ryszard Banach algebras associated with spherical representations of the free group. 91e:22008

#### 43A95 Categorical methods [see also 46Mxx]

- Kleisli, Heinrich The convolution of measures viewed from enriched category theory. 91g:43010

#### 43A99 Miscellaneous topics

- Feichtinger, Hans G. (with Gröchenig, Karlheinz) Banach spaces related to integrable group representations and their atomic decompositions. I. 91g:43011
- (with Gröchenig, Karlheinz) Banach spaces related to integrable group representations and their atomic decompositions. II. 91g:43012
- Gröchenig, Karlheinz *see* Feichtinger, Hans G., 91g:43011 and 91g:43012

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- Berezanskii, Yu. M. (with Kondrat'ev, Yu. G.) ★ Спектральные методы в бесконечномерном анализе. (Russian) [Spectral methods in infinite-dimensional analysis] 91h:46002
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- Célin de Verdière, Yves Comment distribuer des points uniformément sur une sphère? (d'après Lubotzky, Phillips et Sarnak). [How can points be distributed uniformly over a sphere? (following Lubotzky, Phillips and Sarnak)] 91a:11047
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- Shanbhag, D. N. *see* Rao, Calyampudi Radhakrishna, 91a:62033
- Vainerman, L. I. (with Kalyuzhnyi, A. A.) Quantized hypercomplex systems. (Russian) 91d:46071

#### 44-XX Integral transforms, operational calculus {For fractional derivatives and integrals, see 26A33. For Fourier transforms, see 42A38, 42B10. For integral transforms in distribution spaces, see 46F12. For numerical methods, see 65R10.}

##### 44-00 General reference works (handbooks, dictionaries, bibliographies, etc.)

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- Oberhettinger, F. ★ Tables of Fourier transforms and Fourier transforms of distributions. 91g:90010

##### 44-01 Instructional exposition (textbooks, tutorial papers, etc.)

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- Bayen, François (with Margaria, Christian) ★ Problèmes de mathématiques appliquées. Tome 3. (French) [Applied mathematics problems. Vol. 3] 91i:00004
- Margaria, Christian *see* Bayen, François, 91i:00004

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- Brychkov, Yu. A. (with Prudnikov, A. P.) ★ Integral transforms of generalized functions. 91e:44001
- Dimovski, Ivan H. ★ Convolutional calculus. 91h:44001
- Prudnikov, A. P. *see* Brychkov, Yu. A., 91e:44001

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- Amerbaev, V. M. Operator calculus in the works of V. A. Ditkin. (Russian) 91j:01052b
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- Gindikin, S. G. *see* Gelfand, I. M., (Not in MR)

##### 44-06 Proceedings, conferences, collections, etc.

- (Gelfand, I. M.) *see* Mathematical problems of tomography, 91k:44001
- (Gelfand, S. I.) *see* Mathematical problems of tomography, 91k:44001
- (Gindikin, S. G.) *see* Mathematical problems of tomography, 91k:44001
- (Sosinskii, A. B.) *see* Mathematical problems of tomography, 91k:44001

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- (Quinto, Eric Todd) *see* Integral geometry and tomography, 91m:00032

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##### 44A05 General transforms [see also 42A38]

- Koornwinder, Tom H. (with Walter, Gilbert G.) The finite continuous Jacobi transform and its inverse. 91g:44003
- Teugels, Jozef L. Probabilistic proofs of some real inversion formulas. 91g:44001
- Walter, Gilbert G. A finite continuous Gegenbauer transform and its inverse. II. 91g:44002
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- Dimovski, Ivan H. (with Petrova, Radka I.) Finite integral transforms for nonlocal boundary value problems. 91m:34034
- Estrada, Ricardo (with Kanwal, R. P.) A distributional theory for asymptotic expansions. 91c:41085
- Gay, R. Inversion de la transformation de Pompeiu locale. [Inversion of the local Pompeiu transform] 91f:31004
- Kanwal, R. P. *see* Estrada, Ricardo, 91c:41085
- Lopotko, O. V. Integral representations of even positive-definite and related functions. 91m:42010
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- Batty, Charles J. K. Tauberian theorems for the Laplace-Stieltjes transform. 91c:44001
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- Sinha, Sunil Kumar<sup>1</sup> On two-sided Laplace transform and Erdélyi-Kober operators. 91k:44003



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— (with Sánchez Quintana, Ana M.) On the Bessel transformation of rapidly increasing generalized functions. 91e:44006

— (with Negrín Aguirre, Juan Ramón) Fourier-Bessel series expansions of generalized functions and finite Hankel transforms of distributions. 91d:44001

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- Hoang Ngoc Minh, V. (with Jacob, Gérard) Evaluation transform and symbolic calculus for nonlinear control systems. 91k:93056
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- Kalla, Shyam L. see Al-Saqabi, Bader, 91k:34015
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- Prestini, Elena Convolution with oscillating kernels: Bochner-Riesz and spherical partial sums operators. (Italian summary) 91m:42014
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- Stanković, Bogoljub Convolution and shift approximation. 91m:46056
- Takaci, Djurdjica The approximate solution of the operator differential equation. 91k:34009
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- Danielyan, E. A. (with Movsisyan, G. S.) Sharpening the Carathéodory-Riesz theorem. (Russian. Armenian summary) 91d:44006
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- Avdonin, S. A. (with Ivanov, S. A.; Joó, István) On a theorem of N. K. Bari. 91d:47018
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- Cavaretta, A. S. (with Dahmen, Wolfgang; Micchelli, Charles A.) The volume of restricted moment spaces. 91d:42012
- Chaudhry, Muhammad Aslam (with Ahmad, Munir) Generalized Fourier transforms and applications in probability and statistics. 91e:42012
- Chen, Hong Jian (with Wu, Chuan Yi) Conditions for determining exponential families by variance functions. (Chinese) 91d:60032
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- Danielyan, E. A. (with Tatalyan, K. R.) On the moment problem on majorizable classes. (Russian. Armenian summary) 91k:41057
- Dym, Harry On Hermitian block Hankel matrices, matrix polynomials, the Hamburger moment problem, interpolation and maximum entropy. 91c:30065
- Forte, B. (with Hughes, W. P.; Páles, Zs.) Maximum entropy estimators and the problem of moments. (Italian summary) 91f:44009
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- Frontini, Marco (with Rodriguez, G.; Seatzu, S.) An algorithm for computing minimum norm solutions of finite moment problem. 91f:65031
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- Lemmette, Laminita An operator-valued moment problem. 91j:47013
- Lewis, Adrian S. The convergence of entropic estimates for moment problems. 91a:41030
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- Njåstad, Olav Solution of the strong Hamburger moment problem by Laurent continued fractions [Appl. Numer. Math. 4 (1988), no. 2-4, 351-360; MR 89m:30076]. (see 91m:41002)
- A modified Schur algorithm and an extended Hamburger moment problem. 91m:30050
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#### 44A99 Miscellaneous topics

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- Items with secondary classifications in 44A99
- Basu, Debabrata<sup>2</sup> (with Kar, T. K.) A class of integral transforms associated with the Majorana representation of  $SL(2, \mathbb{C})$ . 91j:22016
- Berenstein, Carlos Alberto (with Gay, R.; Yger, Alain) The three squares theorem, a local version. 91g:42015
- Chukhovskii, F. N. see Petrashev, P. V., 91h:82067
- Gay, R. see Berenstein, Carlos Alberto; et al., 91g:42015
- Kar, T. K. see Basu, Debabrata<sup>2</sup>, 91j:22016
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- Petrashev, P. V. (with Chukhovskii, F. N.) Restoration of the phase of an x-ray wave diffracted by a layered monocrystal structure. 91k:82067
- Pilipović, Stevan (with Stanković, Bogoljub; Takaci, Arpad) ★ Asymptotic behaviour and Stieltjes transformation of distributions. 91k:46036



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- (Amson, John C.) *see* Dautray, Robert, 91h:00004b  
 (Artola, Michel) *see* Dautray, Robert, 91h:00004b  
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 (Cessenat, Michel) *see* Dautray, Robert, 91h:00004b  
 Dautray, Robert (with Lions, Jacques-Louis) ★ Mathematical analysis and numerical methods for science and technology. Vol. 4. 91h:00004b  
 Lions, Jacques-Louis *see* Dautray, Robert, 91h:00004b  
 (Nédélec, Jean-Claude) *see* Dautray, Robert, 91h:00004b  
 (Planchar, Jacques) *see* Dautray, Robert, 91h:00004b  
 (Scheurer, Bruno) *see* Dautray, Robert, 91h:00004b

### 45-02 Research exposition (monographs, survey articles)

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- Gripenberg, Gustaf (with Londen, Stig-Olof; Staffans, Olof J.) ★ Volterra integral and functional equations. 91c:45003  
 Londen, Stig-Olof *see* Gripenberg, Gustaf; et al., 91c:45003  
 Staffans, Olof J. *see* Gripenberg, Gustaf; et al., 91c:45003

### 45-03 Historical (must also be assigned at least one classification number from Section 01)

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- Amerbaev, V. M. Operator calculus in the works of V. A. Ditkin. (Russian) 91j:01052b  
 (Ditkin, V. A.) *see* Amerbaev, V. M., 91j:01052b

### 45-06 Proceedings, conferences, collections, etc.

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- (Bahae, Arif Aligadavich) *see* Singular integral operators, 91a:45007

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- Singular integral operators ★ Сингулярные интегральные операторы. (Russian) [Singular integral operators] 91a:45007

## 45A05 Linear integral equations

- Drakhlin, M. E. On the theory of linear functional equations. (Russian) 91j:45001  
 Gabbasov, N. S. A new direct method for solving integral equations of the first kind. 91k:45001  
 Groetsch, C. W. Remarks on some iterative methods for an integral equation in Fourier optics. 91j:45002  
 Loskot, K. (with Rudnicki, R.) Mixing and some integro-functional equations. 91e:45001  
 Márquez Rivera, Carlos The Abel equation in its simplest form. (Spanish) (see 91k:00038)  
 Millar, Robert F. An integral equation solution to the Dirichlet problem for Laplace's equation in an ellipse. 91d:45001  
 Musurilava, E. T. (with Myshkis, A. D.) A typical situation for solving linear integral equations of the first kind according to the method of M. I. Imanaliev. (Russian) 91k:45002  
 Myshkis, A. D. *see* Musurilava, E. T., 91k:45002  
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 Ruymgaart, P. A. (with Soong, T. T.) An integral equation in systems theory. 91c:45001  
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Items with secondary classifications in 45A05

- Bercia, Romeo Existence and uniqueness for linear thermoviscoelasticity of integral type. 91k:73058  
 Klement, Kerstin Lineare Gleichungen erster Art mit kompakten, vollständig symmetrisierbaren Operatoren der Form  $K = AH$ . (English and Russian summaries) [Linear equations of the first kind with compact, completely symmetrizable operators of the form  $K = AH$ ] 91k:47018  
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 Pulyaev, V. F. Bounded and almost periodic solutions of linear integral equations. II. 91k:47124  
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 Wang, Ke On the quasi-periodic solutions of Volterra integro-differential equations with infinite delay. 91a:45005

## 45B05 Fredholm integral equations

- Cui, Ming Gen (with Deng, Zhong Xing; Wu, Bo Ying) Analytic solutions to Fredholm integral equations of the second kind. (Chinese. English summary) 91a:45001  
 Deng, Zhong Xing *see* Cui, Ming Gen; et al., 91a:45001  
 Monegato, Giovanni Orthogonal polynomials and product integration for one-dimensional Fredholm integral equations with "nasty" kernels. (see 91h:00032)  
 Pereverzev, S. V. An estimate for the complexity of an approximate solution of Fredholm equations of the second kind with differentiable kernels. 91a:45002  
 Sharipov, K. K. The complexity of the Fredholm equation of the second kind with kernels in classes with a dominating mixed derivative. 91h:45001  
 Voitishek, A. V. ★ Применение локальных оценок для аппроксимации интенсивности излучения в плоском слое. (Russian) [Application of local estimates for the approximation of the intensity of radiation in a plane layer] 91a:45003  
 Wu, Bo Ying *see* Cui, Ming Gen; et al., 91a:45001  
 Zverev, S. A. Expansion of transmission functions in exponentials by the method of effective energies. (Russian) (see 91h:00036)

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- Atdaev, S. Unique solvability of a class of equations with a Volterra-Fredholm operator. (Russian) 91e:47063  
 Chen, Xinfu (with Friedman, Avner) Maxwell's equations in a periodic structure. 91e:35198  
 Friedman, Avner *see* Chen, Xinfu, 91e:35198  
 Galushko, M. A. The method of stochastic approximation for solving a Fredholm equation of the first kind with random data errors. (Russian) (see 91j:60001)  
 Haidar, Nassar H. S. On eigenvalues of the one-speed neutron transport equation in plane geometry. 91f:82061  
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 Jain, D. L. *see* Sampath, C., 91j:45012  
 Jandhyala, V. K. (with MacNeill, I. B.) Residual partial sum limit process for regression models with applications to detecting parameter changes at unknown times. 91b:62130  
 Kalaida, A. F. Linear one-dimensional integro-differential equations and problems. (Russian) 91a:45018  
 Kovalchik, Yu. I. Approximate calculation of Feynman integrals connected with integral equations. (Russian) 91m:65063  
 Lee, E. Bruce (with You, Yun Cheng) Quadratic optimization for infinite-dimensional linear differential difference type systems: syntheses via the Fredholm equation. 91a:49014  
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 Mücke, A. Die Auflösung schwach singulärer Fredholmscher Integralgleichungen mit angepaßten Quadraturen. (English and Russian summaries) [The solution of weakly singular Fredholm integral equations with adapted quadrature formulas] 91e:65161  
 Oristaglio, Michael L. An inverse scattering formula that uses all the data. 91e:73044  
 Regińska, Teresa Approximate solution of ill-posed problems. (Polish. English summary) 91g:65147  
 Reichel, Lothar Fast solution methods for Fredholm integral equations of the second kind. 91i:65211  
 Rööm, R. An algorithm for the approximate restoration of signals distorted by a linear smoothing filter. (Russian. English and Estonian summaries) (Not in MR)  
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## 45C05 Eigenvalue problems [see also 34Lxx, 35Pxx, 45P05, 47A75]

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 Shulaya, D. A. On the expansion of solutions of the linear multivelocity transport theory equation in eigenfunctions of the characteristic equation. 91h:45001  
 Soblov, I. A theorem on the existence of a third eigenvalue for a linear integral operator with a nonnegative kernel. (Russian. Tajiki summary) 91b:45002  
 Zhidkov, E. P. (with Nikonov, E. G.; Khoromskii, B. N.) Solution of the eigenvalue problem for a class of hypersingular quasipotential integral equations. (Russian) 91i:45001

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- Alvarez-Estrada, R. F. Quantum diffractive reflection by a periodic nonpenetrable surface: a multiple scattering approach. 91m:81315  
 Anselone, P. M. (with Sloan, Ian H.) Spectral approximations for Wiener-Hopf operators. 91c:47044  
 Berg, Christian (with Fuglede, Bent) Liouville's operator for a disc in space. 91j:31007  
 Cobos, Fernando (with Kühn, Thomas) Eigenvalues of integral operators with positive definite kernels satisfying integrated Hölder conditions over metric compacta. 91i:47068  
 Didenko, V. D. The interpolation method for solving the Hilbert boundary value problem. (Russian) 91a:47013  
 Dektorskii, R. Ya. Eigenvalues of some classes of integral operators. 91f:47067  
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- Lei, Peng (with Yang, Ming Zhu; Liu, Rong Sheng; Ye, Jian Jun) The spectrum of some abstract kinetic operators in inhomogeneous media with applications. 91h:47055
- Liu, Rong Sheng see Lei, Peng; et al., 91h:47055
- Liu, Xinzhi Nonlinear boundary value problems for first order impulsive integro-differential equations. 91a:45014
- Mohamed, M. I. (with Eissa, R. P.) On the eigenvalue problem with integral operators. 91b:47116
- Sloan, Ian H. see Anselone, P. M., 91c:47044
- Wang, Hai Yan (with Yang, Ming Zhu; Wang, Wen Wei) Spectra of spherically symmetric transport operators under generalized boundary conditions. (Chinese. English summary) 91a:82064
- Wang, Wen Wei see Wang, Hai Yan; et al., 91a:82064
- Yang, Ming Zhu see Wang, Hai Yan; et al., 91a:82064 and Lei, Peng; et al., 91h:47055
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#### 45D05 Volterra integral equations [see also 34A12]

- Aizicovici, Sergiu (with Londen, Stig-Olof; Reich, Simeon) Asymptotic behavior of solutions to a class of nonlinear Volterra equations. 91m:45001
- Balachandran, Krishnan (with Ilamrasi, S.) An existence theorem for a Volterra integral equation with deviating arguments. 91a:45002
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- Belorusets, V. B. Determination of the convergence domain of the Volterra series. 91b:45002
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- Sirotkin, O. L. Spectral analysis of a Volterra integro-differential equation with an aftereffect function. (Russian) (Not in MR)
- Srazhdinov, A. Solvability of Volterra-type integral equations of the first kind. (Russian) (Not in MR)
- On the regularization of integral equations of the first kind of Volterra type. 91h:45003
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- Bainov, D. D. (with Kostadinov, St. I.; Zakhariyev, Andrei) Abstract Volterra type integral equations. 91b:45023
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- Brunner, Hermann The numerical treatment of Volterra integro-differential equations with unbounded delay. 91g:65296
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- Corrigendum: "Impulse response acquisition as an inverse heat conduction problem". 91d:35225b
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- Corduneanu, C. Integral representation of solutions of linear abstract Volterra functional-differential equations. 91b:45024
- Eggermont, P. P. B. (with Lubich, Christian) Uniform error estimates of operational quadrature methods for nonlinear convolution equations on the half-line. 91j:65195
- Fitzgibbon, William E. Asymptotic behavior of solutions to a class of Volterra integro-differential equations. 91h:45025
- Giorno, V. see Buonocore, A.; et al., 91c:60099
- Gryn', V. I. On the determination of the absorption coefficient for spherical symmetry. (Russian) 91m:85005
- Gur'yanova, I. E. (with Myshkis, A. D.) Asymptotic equivalence and stability of abstract integral equations of Volterra type. (Russian) 91k:45012
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- Lizama, Carlos On an extension of the Trotter-Kato theorem for resolvent families of operators. 91c:47093
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- Riley, Bruce V. A sinc-collocation method for weakly singular Volterra integral equations. 91j:45019
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#### 45Exx Singular integral equations [see also 30E20, 30E25, 44A15, 44A35]

- (Babaev, Arif Allgeldarovich) see Singular integral operators, 91a:45007
- Dybin, V. B. ★ Корректные задачи для сингулярных интегральных уравнений. (Russian) [Well-posed problems for singular integral equations] 91a:45006

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- Abdullaev, S. K.** Multidimensional singular integral equations in weighted Hölder spaces that degenerate on a noncompact set. 91k:45003
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- Berthold, Dietmar** Lagrangian interpolation operators in Hölder spaces. 91d:45003
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- Horl, Muneo** (with Nemat-Nasser, Siavouche) Asymptotic solution of a class of strongly singular integral equations. 91f:45002
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- Lin, Wei<sup>1</sup>** see **Dai, Dao Qing**, 91j:45005
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- Lu, Jian Ke** Some singular integral equations with translations. (Chinese. English summary) 91f:45003
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- Madych, W. R.** On the correctness of the problem of inverting the finite Hilbert transform in certain aeroelastic models. 91d:45004
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- see also **Frisch, Hélène Berthe**; et al., 91d:45006 and **Zweifel, P. F.**, 91j:45007
- Merlin, A. V.** (with Merlina, N. I.) Singular integral equations with normalized kernel. (Russian) (see 91b:00025)
- Merlina, N. I.** see **Merlin, A. V.**, (91b:00025)
- Mkhitarian, S. M.** (with Abdu Mokhammed Abdalla Akhmed) Different methods for solving the Carleman integral equation. (Russian. Armenian summary) (Not in MR)
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- Nguyễn Văn Mậu** Solvability in closed form of singular integral equations with analytic kernels and reflection. (Russian) 91e:45010
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- Abdu, Mokhammed Abdalla Akhmed** see **Mkhitarian, S. M.**, 91j:73011
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- Bustamante González, Jorge** (with González Diéguez, Belarmino) The Riemann boundary value problem and singular integral equations on closed nonsmooth curves. (Spanish. English summary) (Not in MR)
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- Anderssen, R. S.** (with de Hoog, F. R.) Abel integral equations. 91f:45004
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- Betilgiriev, M. A.** see **Askhabov, S. N.**, 91k:45004
- Dặng Đình Ấng** see **Dặng Đình Hải**, 91d:45007
- Dặng Đình Hải** (with Dặng Đình Ấng) On nonsmooth solutions of Abel's integral equation. 91d:45007
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- On the equation  $f(x) = \int_{-\infty}^{\infty} f(x+y) d\mu(y)$  for  $x \geq 0$ . 91c:45011
- Shen, Yong Xiang** Some kinds of singular integral equations of Hilbert kernel with convolution. (Not in MR)
- Vainikko, Genadii** On the smoothness of the solution of multidimensional weakly singular integral equations. 91a:45010

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- Abrahams, I. D.** (with Wickham, G. R.) The scattering of sound by two semi-infinite parallel staggered plates. II. Evaluation of the velocity potential for an incident plane wave and an incident duct mode. 91c:76095
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- Anselone, P. M.** (with Sloan, Ian H.) Spectral approximations for Wiener-Hopf operators. 91c:47044
- Antipov, Yu. A.** Analytic solution of a two-dimensional problem for a half-plane with a crack that is close to the boundary. (Russian) 91g:73010



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- Berenstein, Carlos Alberto (with Struppa, Daniele C.) Complex analysis and convolution equations. (Russian) 91d:32001
- Böttcher, Albrecht Wiener-Hopf determinants with rational symbols. 91g:47017
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- Graham, Ivan G. (with Mendes, Wendy R.) Nystrom-product integration for Wiener-Hopf equations with applications to radiative transfer. 91c:65084
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- Heins, Albert E. The Sommerfeld half-plane problem revisited. V. The bifurcated guide with mixed boundary conditions on the septum. 91i:78007
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- Nakhman, A. D. Convolution operators in weighted spaces. (Russian) (see 91b:34001)
- Pasenchuk, A. E. Factorization of functions in some commutative topological algebras. 91f:46074
- Pavlov, E. A. A class of singular integral operators. (Russian. Ukrainian summary) 91m:47075
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- Ramachandran, B. (with Lau, Ka-Sing; Gu, Hua Min) On characteristic functions satisfying a functional equation and related classes of simultaneous integral equations. 91g:60023
- Rong, Er Qian (with Li, Xian Fang) Riemann boundary value problems with convolution and their applications. (Chinese. English summary) 91f:47043
- dos Santos, A. F. (with Lebre, A. B.; Teixeira, Francisco Sepúlveda) The diffraction problem for a half plane with different face impedances revisited. 91b:47055
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- Stepanov, V. D. On the boundedness and compactness of a class of integral operators. 91f:47073
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- Varley, Eric (with Walker, J. D. A.) A method for solving singular integrodifferential equations. 91a:76012
- Vladimirov, V. S. The Wiener-Hopf equation on the half-line in the Nevanlinna and the Smirnov algebras. (Russian. English summary) 91d:47023
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- Askhabov, S. N. (with Karapetyants, N. K.; Yakubov, A. Ya.) Integral equations of convolution type with power nonlinearity and systems of such equations. 91j:45009
- Berkovich, F. D. A class of integral equations on a half-line and their discrete analogues. (Russian) 91j:45010
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- Ostapenko, V. V. (with Grabovoi, I. P.) Integration of a linear multivalued mapping of a special type. 91j:45011
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- Eggermont, P. P. B. (with Saranen, Jukka)  $L^p$  estimates of boundary integral equations for some nonlinear boundary value problems. 91m:65325
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- Karlovich, Yu. I. (with Mardiev, R.) On  $n(d)$ -normality in Hölder spaces of singular integral operators with shift. (Russian) 91k:47121
- Kozlov, A. A boundary value problem with cyclic shift for a system of first-order equations of composite type with two double real characteristics. (Russian. Tajiki summary) 91k:35180
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- Alizovich, S. M. Asymptotic solution of a class of dual equations for small values of the parameter. 91m:45006
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- Grigor'ev, Yu. A. Some conditions for the solvability of equations of convolution type. (Russian) 91a:45012
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- Costabel, Martin (with Stephan, E. P.) Integral equations for transmission problems in linear elasticity. 91g:73021
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Da Prato, Giuseppe (with Lunardi, Alessandra) Stabilizability of integrodifferential parabolic equations. 91a:45015

Diallo, U. U. (with Zabrejko, P. P.) Conditions for the asymptotic stability of solutions of Barbashin integro-differential equations. (Russian. English summary) 91c:45019

Fink, A. M. A Tauberian approach to asymptotic stability of competition equations. 91a:44001

Gur'yanova, I. E. (with Myshkis, A. D.) Asymptotic equivalence and stability of abstract integral equations of Volterra type. (Russian) 91k:45012

Hamaya, Yoshihiro Total stability property in limiting equations of integrodifferential equations. 91j:34122

Huang, Ke Lei *see* Li, De Ming; et al., 91c:58038

Li, De Ming (with Lu, Qi Shao; Huang, Ke Lei) Bifurcation of nonlinear integral equation with two-dimensional null space. 91c:58038

Lu, Qi Shao *see* Li, De Ming; et al., 91c:58038

Lunardi, Alessandra *see* Da Prato, Giuseppe, 91a:45015

Myshkis, A. D. *see* Gur'yanova, I. E., 91k:45012

Rama Mohana Rao, M. (with Sivasundaram, S.) Stability of Volterra system with impulsive effect. 91m:34100

Sivasundaram, S. *see* Rama Mohana Rao, M., 91m:34100

Tuzinkevich, A. V. A typical bifurcation in integral models of ecosystems. (Russian)

91h:92037

Zabrejko, P. P. *see* Diallo, U. U., 91c:45019

#### 45M99 None of the above, but in this section

Fink, A. M. (with Gatica, Juan A.) Positive almost periodic solutions of some delay integral equations. 91g:45013

Gatica, Juan A. *see* Fink, A. M., 91g:45013

Items with secondary classifications in 45M99

Abrahams, I. D. (with Wickham, G. R.) Acoustic scattering by two parallel slightly staggered rigid plates. 91j:76056

Wickham, G. R. *see* Abrahams, I. D., 91j:76056

#### 45N05 Abstract integral equations, integral equations in abstract spaces

Bainov, D. D. (with Kostadinov, St. I.; Zakhariyev, Andrei) Abstract Volterra type integral equations. 91b:45023

Clément, Philippe (with Prüss, Jan) Completely positive measures and Feller semigroups. 91d:45011

Corduneanu, C. Integral representation of solutions of linear abstract Volterra functional-differential equations. 91b:45024

Fichera, Gaetano The difficult connections between functional analysis and mathematical physics. (Italian. English summary) 91i:45009

Fitzgibbon, William E. Asymptotic behavior of solutions to a class of Volterra integrodifferential equations. 91b:45025

Kostadinov, St. I. *see* Bainov, D. D.; et al., 91b:45023

Pogorel, A. A. Ultimately ill-posed integral equations in a Hilbert space. (Russian. English summary) (Not in MR)

Prüss, Jan *see* Clément, Philippe, 91d:45011

Zakhariyev, Andrei *see* Bainov, D. D.; et al., 91b:45023

Items with secondary classifications in 45N05

Argyros, Ioannis K. On quadratic equations. 91a:47084

Balachandran, Krishnan (with Ilamman, S.) Existence of solution for nonlinear Volterra integral equations. 91m:47093

Da Prato, Giuseppe (with Lunardi, Alessandra) Stabilizability of integrodifferential parabolic equations. 91a:45015

Fabiano, R. H. (with Ito, Kazufumi) Semigroup theory and numerical approximation for equations in linear viscoelasticity. 91b:45021

Favini, Angelo Implicit integrodifferential equations. 91b:45012

Grigor'ev, Yu. A. Some conditions for the solvability of equations of convolution type. (Russian) 91a:45012

Guo, Da Jun Solutions of nonlinear integrodifferential equations of mixed type in Banach spaces. 91b:45013

Ilamman, S. *see* Balachandran, Krishnan, 91m:47093

Ito, Kazufumi *see* Fabiano, R. H., 91b:45021

Lunardi, Alessandra *see* Da Prato, Giuseppe, 91a:45015

Milosavljević, A. I. An abstract integro-differential equation with a periodic coefficient. I. (Russian) 91k:47126a

— An abstract integro-differential equation with a periodic coefficient. II. (Russian) 91k:47126b

Mitidieri, Enzo (with Vrabie, Ioan I.) Nonlinear integrodifferential equations in a Banach space. (Italian summary) 91g:47047

Sforza, Daniela Infinite delay parabolic integro-differential equations with singular kernels. 91b:45008

Smulja, Stanisław On the structure of solution sets of nonlinear equations. 91k:47161

Vrabie, Ioan I. *see* Mitidieri, Enzo, 91g:47047

Yu, Hong Yi *see* Zhuang, Wan, 91c:45018

Zheng, Quan<sup>2</sup> On a class of nonlinear integro-differential equations in Banach spaces. II. (Chinese. English summary) 91b:45018

Zhuang, Wan (with Yu, Hong Yi) Global existence of solution to nonlinear integro-differential equation in a Banach space. 91c:45018

#### 45P05 Integral operators [see also 47B38, 47G10]

Lin, Yi<sup>2</sup> The Noether condition and index formula for a class of singular integral equations with shift. (Chinese. English summary) 91c:45020

Mar'ya, V. G. Inversion formulas for boundary integral equations and their applications. (Russian) 91d:45012

Nakhman, A. D. Elementary estimates for weighted norms of convolution operators. 91b:45026

Selvaggi, Renata (with Sisto, Irene) Integral operators on  $C^1$ -cylinders and their nontangential traces. 91g:45014

Shi, Peter An iterative method for obstacle problems via Green's functions. 91g:45015

Sisto, Irene *see* Selvaggi, Renata, 91g:45014

Wright, Paul E. Finite symmetric convolution operators and singular symmetric differential operators. 91c:45023

Yan, Xin Li The eigenvalues of two nonlinear integral operators in physics. (Chinese. English summary) 91j:45022

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Atiaev, S. Unique solvability of a class of equations with a Volterra-Fredholm operator. (Russian) 91c:47063

(Babaev, Arif Aligeldarovich) *see* Singular integral operators, 91a:45007

Bastos, M. A. (with dos Santos, A. F.) Convolution equations of the first kind on a finite interval in Sobolev spaces. 91c:47066



- Debrushkin, V. A. ★ Краевые задачи динамической теории упругости для клиновидных областей. (Russian) [Boundary value problems of the dynamic theory of elasticity for wedge-shaped domains] 91b:73023
- Doktorskii, R. Ya. Eigenvalues of some classes of integral operators. 91b:47067
- Dostanić, M. R. Generalizations of Mercer's theorem for a class of nonselfadjoint operators. (Serbo-Croatian summary) 91b:47069
- Dzhangibekov, G. On the Noethericity and index of some two-dimensional singular integral operators. 91b:47070
- Goyal, S. P. see Srivastava, Hari M.; et al., 91b:33013
- Hu, Ke see Owa, Shigeyoshi, 91b:30021
- Ishikawa, Yasushi The  $\Gamma$ -antilocality of stable generators whose Lévy measures are supported on a cone. 91a:60189
- Jain, R. M. see Srivastava, Hari M.; et al., 91b:33013
- Karadzhyan, S. G. An efficient algorithm for the inversion of an integral operator with a sum-difference harmonic kernel. 91b:65151
- Karlovich, Yu. I. (with Mardiev, R.) On  $n(d)$ -normality in Hölder spaces of singular integral operators with shift. (Russian) 91b:47121
- Kekholm, Niels Jørgen Spectral analysis of perturbed multiplication operators occurring in polymerization chemistry. 91b:47115
- Kostomarov, G. P. Properties of Abel integral operators. (Russian) 91b:47071
- Kuleshov, A. A. Linear integral equations of the third kind in weighted  $L_2$  spaces. I. 91j:47058
- Kurbatov, V. G. An exponential estimate for the Cauchy matrix. (Russian) 91b:47074
- see also Kuznetsova, V. I., 91b:47036
- Kuznetsova, V. I. (with Kurbatov, V. G.) On the Noethericity of operators of convolution type. (Russian) 91b:47036
- Mardiev, R. see Karlovich, Yu. I., 91b:47121
- Nikulina, T. V. Calculation of the contingent derivative with respect to direction for an integral operator. 91c:49025
- Ober, Raimund A note on a system-theoretic approach to a conjecture by Peller-Khrushchev: the general case. 91b:47038
- Owa, Shigeyoshi (with Hu, Ke) Properties of certain integral operator. 91c:30021
- Pavlov, E. A. A class of singular integral operators. (Russian. Ukrainian summary) 91b:47075
- Pillidi, V. S. The method of excising singularities for a class of singular integral operators. (Russian) 91b:47076
- dos Santos, A. F. see Bastos, M. A., 91b:47066
- Sobirov, I. A theorem on the existence of a third eigenvalue for a linear integral operator with a nonnegative kernel. (Russian. Tajiki summary) 91b:45002
- Srivastava, Hari M. (with Goyal, S. P.; Jain, R. M.) Fractional integral operators involving a general class of polynomials. 91c:33013
- Tong, Yu Sun Quasilinear integral operators. (Chinese) 91c:47107
- Widom, Harold The heat expansion for systems of integral equations. 91a:47071
- The heat expansion for systems of integral equations. II. 91a:47072
- Szegő expansions for operators with smooth or nonsmooth symbol. 91b:47057
- Items listed otherwise than by author
- Singular integral operators ★ Сингулярные интегральные операторы. (Russian) [Singular integral operators] 91a:45007

## 46-XX Functional analysis {For manifolds modeled on topological linear spaces, see 57N20, 58Bxx.}

### 46-00 General reference works (handbooks, dictionaries, bibliographies, etc.)

(Johnson, William B.) see *Reviews in functional analysis*, 91a:46001

Items listed otherwise than by author

*Reviews in functional analysis* ★ *Reviews in functional analysis* 1980-86. Vol. 1-4. 91a:46001

Items with secondary classifications in 46-00

(Halmos, Paul R.) see *Reviews in operator theory*, 91a:47001

Oberhettinger, F. ★ Tables of Fourier transforms and Fourier transforms of distributions. 91g:00010

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*Reviews in operator theory* ★ *Reviews in operator theory* 1980-86. Vol. 1-4. 91a:47001

### 46-01 Instructional exposition (textbooks, tutorial papers, etc.)

(Bensoussan, Alain) see Samuëlides, M., 91c:46002

Choudhary, B. (with Nanda, Sudarsan) ★ Functional analysis with applications. 91c:46001

Conway, John B. ★ A course in functional analysis. 91c:46001

Debnath, Lokenath (with Mikusiński, Piotr) ★ Introduction to Hilbert spaces with applications. 91b:46001

Hsiang, W. H. Projective limit construction of locally convex spaces by semi-norms. 91c:46002

Kato, Tosio ★ Iso kaiseiki. (Japanese) [Topological analysis] 91c:46002

Khelemskii, A. Ya. ★ Банаховы и полнорнормированные алгебры: общая теория, представления, гомологии. (Russian) [Banach and polynormed algebras: general theory,

representations, homology] 91b:46001

Mikusiński, Piotr see Debnath, Lokenath, 91b:46001

Nanda, Sudarsan see Choudhary, B., 91c:46001

Richards, Ian (with Youn, Heekyung) ★ Theory of distributions. 91b:46003

Samuëlides, M. (with Touzillier, L.) ★ Analyse fonctionnelle. (French) [Functional analysis] 91c:46002

Touzillier, L. see Samuëlides, M., 91c:46002

Vladimirov, V. S. ★ Обобщенные функции и их применение. (Russian) [Generalized functions and their application] 91b:46001

Youn, Heekyung see Richards, Ian, 91b:46003

Zimmer, Robert J. ★ Essential results of functional analysis. 91b:46002

Items with secondary classifications in 46-01

Bayen, François (with Margaria, Christian) ★ Problèmes de mathématiques appliquées.

Tome 2. (French) [Applied mathematics problems. Vol. 2] 91b:00006

— (with Margaria, Christian) ★ Problèmes de mathématiques appliquées. Tome 3. (French) [Applied mathematics problems. Vol. 3] 91b:00004

(Boron, Leo F.) see Riesz, Frigyes, 91g:00002

Choquet-Bruhat, Yvonne (with DeWitt-Morette, Cécile) ★ Analysis, manifolds and physics. Part II. 91c:58001

(Cooke, Roger Marvin) see Sadovnichii, V. A., 91m:47001

DePree, John (with Swartz, Charles W.) ★ Introduction to real analysis. 91c:00001

DeVito, Carl L. ★ Functional analysis and linear operator theory. 91b:47001

DeWitt-Morette, Cécile see Choquet-Bruhat, Yvonne, 91c:58001

Dudley, Richard M. ★ Real analysis and probability. 91g:60001

Kudryavtsev, L. D. ★ Курс математического анализа. Том 3. (Russian) [A course in mathematical analysis. Vol. 3] 91f:00002c

Lebedev, V. I. ★ Функциональный анализ и вычислительная математика. (Russian) [Functional analysis and numerical mathematics] 91g:00001

Margaria, Christian see Bayen, François, 91b:00006 and 91b:00004

Murphy, Gerard J. ★  $C^*$ -algebras and operator theory. 91m:46004

Riesz, Frigyes (with Székelyfalvi-Nagy, Béla) ★ Functional analysis. 91g:00002

Sadovnichii, V. A. ★ Theory of operators. 91m:47001

Swartz, Charles W. see DePree, John, 91c:00001

Székelyfalvi-Nagy, Béla see Riesz, Frigyes, 91g:00002

### 46-02 Research exposition (monographs, survey articles)

Berezanskii, Yu. M. (with Kondrat'ev, Yu. G.) ★ Спектральные методы в бесконечномерном анализе. (Russian) [Spectral methods in infinite-dimensional analysis] 91b:46002

Cristescu, Romulus (with Grigore, Gheorghe; Niculescu, Constantin P.; Păltineanu, Gavril; Popa, Nicolae; Vuza, Dan Tudor) ★ Structuri de ordine în analiza funcțională. Vol. 2. (Romanian) [Order structures in functional analysis. Vol. 2] 91c:46003

Grigore, Gheorghe see Cristescu, Romulus; et al., 91c:46003

Kondrat'ev, Yu. G. see Berezanskii, Yu. M., 91b:46002

Niculescu, Constantin P. see Cristescu, Romulus; et al., 91c:46003

Păltineanu, Gavril see Cristescu, Romulus; et al., 91c:46003

Popa, Nicolae see Cristescu, Romulus; et al., 91c:46003

Vuza, Dan Tudor see Cristescu, Romulus; et al., 91c:46003

Items with secondary classifications in 46-02

Aubin, Jean-Pierre (with Frankowska, Halina) ★ Set-valued analysis. 91d:49001

Christensen, Erik<sup>1</sup> (with Sinclair, Allan M.) A survey of completely bounded operators. 91b:46051

(Embarek, Djilali) see Maslov, V. P., 91k:47003

Frankowska, Halina see Aubin, Jean-Pierre, 91d:49001

Goldmann, Helmut ★ Uniform Fréchet algebras. 91b:46073

Goodman, Frederick M. (with de la Harpe, Pierre; Jones, Vaughan Frederick Randal) ★ Coxeter graphs and towers of algebras. 91c:46082

de la Harpe, Pierre see Goodman, Frederick M.; et al., 91c:46082

Jones, Vaughan Frederick Randal see Goodman, Frederick M.; et al., 91c:46082

Maslov, V. P. ★ Méthodes opératorielles. (French) [Operator methods] 91k:47003

Sinclair, Allan M. see Christensen, Erik<sup>1</sup>, 91b:46051

Wright, Stephen James Derivations from subalgebras of operator algebras: results and problems old and new. 91m:46111

### 46-03 Historical (must also be assigned at least one classification number from Section 01)

Sacconan, J. J. On the origin of extreme points and the Krein-Mil'man theorem. 91c:46003

Items with secondary classifications in 46-03

Bishop, Errett ★ Selected papers. 91b:01091

Dieudonné, Jean A. Grothendieck's early work (1950-1960). 91i:01073

(Grothendieck, Alexander) see Serre, Jean-Pierre, 91b:01084 and Dieudonné, Jean, 91i:01073

Hsiang, W. H. Projective limit construction of locally convex spaces by semi-norms. 91c:46002

Klöbe, Gottfried Banach und die Lemberger Schule der Funktionsanalysis. [Banach and the Lemberg school of functional analysis] 91i:01055

(Lévy, Paul) see Milman, Vitali D., 91d:01005

Milman, Vitali D. The heritage of P. Lévy in geometrical functional analysis. 91d:01005

Pier, Jean-Paul ★ L'analyse harmonique. (French) [Harmonic analysis] 91f:43001

Serre, Jean-Pierre Rapport au comité Fields sur les travaux de A. Grothendieck. [Report to the Fields Committee on the works of A. Grothendieck] 91b:01084

Shields, Allen Lowell Banach algebras, 1939-1989. 91c:01044

Wang, Ting Fu see Wu, Cong Xin, (Not in MR)

(Wermer, John) see Bishop, Errett, 91b:01091

Wu, Cong Xin (with Wang, Ting Fu) Research of Orlicz spaces in China. (Not in MR)

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#### Bibliography:

- Bishop, Errett A. *see* Bishop, Errett, 91h:01091  
Grothendieck, Alexander *see* Serre, Jean-Pierre, 91h:01084

#### Biography:

- Bishop, Errett A. *see* Bishop, Errett, 91h:01091  
Grothendieck, Alexander *see* Dieudonné, Jean, 91i:01073

### 46-06 Proceedings, conferences, collections, etc.

- (Antoniuk, Piotr) *see* Generalized functions and convergence, 91h:46004  
(Choquet, Gustave) *see* Seminar: Introduction to Analysis, 91m:46002  
(Godefroy, Gilles) *see* Seminar: Introduction to Analysis, 91m:46002  
(Kamidski, Andrzej) *see* Generalized functions and convergence, 91h:46004  
(Mikusiński, Jan) *see* Generalized functions and convergence, 91h:46004  
(Müller, P. F. X.) *see* Geometry of Banach spaces, 91m:46001  
(Musielak, Julian) *see* Function spaces, 91e:46004  
(Rogalski, M.) *see* Seminar: Introduction to Analysis, 91m:46002  
(Saint-Raymond, Jean) *see* Seminar: Introduction to Analysis, 91m:46002  
(Schachermayer, W.) *see* Geometry of Banach spaces, 91m:46001  
(Terzioglu, Tosun) *see* Advances in the theory of Fréchet spaces, 91h:46003

Items listed otherwise than by author

- Advances in the theory of Fréchet spaces ★ Advances in the theory of Fréchet spaces. 91h:46003

#### Conference:

- Function Spaces ★ Function spaces. 91e:46004  
Generalized Functions and Convergence ★ Generalized functions and convergence. 91h:46004  
Geometry of Banach Spaces ★ Geometry of Banach spaces. 91m:46001  
Function spaces ★ Function spaces. 91e:46004  
Generalized functions and convergence ★ Generalized functions and convergence. 91h:46004  
Geometry of Banach spaces ★ Geometry of Banach spaces. 91m:46001  
Istanbul ★ Advances in the theory of Fréchet spaces. 91h:46003  
Katowice ★ Generalized functions and convergence. 91h:46004  
NATO Advanced Research Workshop:  
Advances in the Theory of Fréchet Spaces ★ Advances in the theory of Fréchet spaces. 91h:46003

#### Seminar:

- Introduction to Analysis ★ Séminaire d'Initiation à l'Analyse. (French) [Seminar: Introduction to Analysis] 91m:46002  
Strobl ★ Geometry of Banach spaces. 91m:46001  
Symposium:  
Research on Coadjoint Orbits in Representation Theory ★ Hyogenron ni okeru kyōyaku zuihankidō no kenkyū. (Japanese) [Research on coadjoint orbits in representation theory] 91e:46005

#### Symposium:

- Research on Coadjoint Orbits in Representation Theory ★ Hyogenron ni okeru kyōyaku zuihankidō no kenkyū. (Japanese) [Research on coadjoint orbits in representation theory] 91e:46005

Theory and applications of differentiable functions of several variables ★ Theory and applications of differentiable functions of several variables. XIII. (Not in MR)

Items with secondary classifications in 46-06

- (Accardi, Luigi) *see* Quantum probability and applications, 91e:00023  
(Araki, Huzihiro) *see* Mappings of operator algebras, 91k:46058  
(Arsene, Gr.) *see* Linear operators in function spaces, 91i:47001  
(Arveson, William B.) *see* Operator theory: operator algebras and applications, 91g:47001 and 91g:47002  
(Choban, M. M.) *see* Topological algebras, 91b:00053  
(Ciesielski, Zbigniew) *see* Approximation and function spaces, 91k:00017  
(Combes, Alain) *see* Operator algebras, unitary representations, enveloping algebras, and invariant theory, 91m:00036  
(Conway, John B.) *see* Operator theory, 91e:00030  
(Dixmier, Jacques) *see* Operator algebras, unitary representations, enveloping algebras, and invariant theory, 91m:00036  
(Douglas, Ronald G.) *see* Operator theory: operator algebras and applications, 91g:47001 and 91g:47002  
(Duflo, Michel) *see* Operator algebras, unitary representations, enveloping algebras, and invariant theory, 91m:00036  
(Helson, H.) *see* Linear operators in function spaces, 91i:47001  
(Joseph, Anthony) *see* Operator algebras, unitary representations, enveloping algebras, and invariant theory, 91m:00036  
(Kadison, Richard V.) *see* Mappings of operator algebras, 91k:46058  
(Morrel, B. B.) *see* Operator theory, 91e:00030  
(Rentschler, Rudolf) *see* Operator algebras, unitary representations, enveloping algebras, and invariant theory, 91m:00036  
(Sákalai-Nagy, Béla) *see* Linear operators in function spaces, 91i:47001  
(Vasilescu, F.-H.) *see* Linear operators in function spaces, 91i:47001  
(von Waldenfels, Wilhelm) *see* Quantum probability and applications, 91i:00023

Items listed otherwise than by author

- Approximation and function spaces ★ Approximation and function spaces. 91k:00017  
Birthday:

- Dixmier, Jacques ★ Operator algebras, unitary representations, enveloping algebras, and invariant theory. 91m:00036  
Cochin ★ Proceedings of the Symposium on Operator Theory and Functional Analysis. 91e:00036

#### Colloquium:

- Operator Algebras, Unitary Representations, Enveloping Algebras, and Invariant Theory ★ Operator algebras, unitary representations, enveloping algebras, and invariant theory. 91m:00036

#### Conference:

- Functional Analysis ★ Operator Theory: Proceedings of the 1988 GPOTS-Wabash Conference. 91e:00030  
Operator Theory ★ Operator Theory: Proceedings of the 1988 GPOTS-Wabash Conference. 91e:00030  
— ★ Linear operators in function spaces. 91i:47001  
Durham, NH ★ Operator theory: operator algebras and applications. Part 1. 91g:47001  
— ★ Operator theory: operator algebras and applications. Part 2. 91g:47002  
Heidelberg ★ Quantum probability and applications. V. 91i:00023  
Indianapolis, IN ★ Operator Theory: Proceedings of the 1988 GPOTS-Wabash Conference. 91e:00030  
Lawrence, KS ★ Proceedings of the Seventh Great Plains Operator Theory Seminar. 91e:47001  
Lecture Notes in Mathematics ★ Quantum probability and applications. V. 91i:00023  
Linear operators in function spaces ★ Linear operators in function spaces. 91i:47001  
Mappings of operator algebras ★ Mappings of operator algebras. 91k:46058  
Meetings:

- Proceedings of Symposia in Pure Mathematics ★ Operator theory: operator algebras and applications. Part 1. 91g:47001

- ★ Operator theory: operator algebras and applications. Part 2. 91g:47002  
Operator algebras, unitary representations, enveloping algebras, and invariant theory ★ Operator algebras, unitary representations, enveloping algebras, and invariant theory. 91m:00036

- Operator theory ★ Operator Theory: Proceedings of the 1988 GPOTS-Wabash Conference. 91e:00030

- Operator theory: operator algebras and applications ★ Operator theory: operator algebras and applications. Part 1. 91g:47001

- ★ Operator theory: operator algebras and applications. Part 2. 91g:47002

- Paris ★ Operator algebras, unitary representations, enveloping algebras, and invariant theory. 91m:00036

- Philadelphia, PA ★ Mappings of operator algebras. 91k:46058

#### Proceedings:

- GPOTS-Wabash Conference ★ Operator Theory: Proceedings of the 1988 GPOTS-Wabash Conference. 91e:00030

- Operator Theory Seminar ★ Proceedings of the Seventh Great Plains Operator Theory Seminar. 91e:47001

- Symposium on Operator Theory and Functional Analysis ★ Proceedings of the Symposium on Operator Theory and Functional Analysis. 91e:00036

- Progress in Mathematics ★ Mappings of operator algebras. 91k:46058

- ★ Operator algebras, unitary representations, enveloping algebras, and invariant theory. 91m:00036

- Quantum probability and applications ★ Quantum probability and applications. V. 91i:00023

#### Research Institute:

- Operator Theory: Operator Algebras and Applications ★ Operator theory: operator algebras and applications. Part 1. 91g:47001

- ★ Operator theory: operator algebras and applications. Part 2. 91g:47002

#### Seminar:

- Operator Algebras ★ Mappings of operator algebras. 91k:46058

- Operator Theory ★ Proceedings of the Seventh Great Plains Operator Theory Seminar. 91e:47001

#### Symposium:

- Operator Theory and Functional Analysis ★ Proceedings of the Symposium on Operator Theory and Functional Analysis. 91e:00036

- Timişoara ★ Linear operators in function spaces. 91i:47001

- Topological algebra ★ Топологическая алгебра. (Russian) [Topological algebra] 91b:00053

- Warsaw ★ Approximation and function spaces. 91k:00017

#### Workshop:

- Quantum Probability ★ Quantum probability and applications. V. 91i:00023

### 46Axx Topological linear spaces and related structures {For function spaces, see 46Exx.}

Items with secondary classifications in 46Axx

- (Terzioglu, Tosun) *see* Advances in the theory of Fréchet spaces, 91h:46003

Items listed otherwise than by author

- Advances in the theory of Fréchet spaces ★ Advances in the theory of Fréchet spaces. 91h:46003

- Istanbul ★ Advances in the theory of Fréchet spaces. 91h:46003

#### NATO Advanced Research Workshop:

- Advances in the Theory of Fréchet Spaces ★ Advances in the theory of Fréchet spaces. 91h:46003

### 46A03 General theory of locally convex spaces

- Antosik, Piotr (with Chun, Bu Zhen; Lu, Li Rong; Pap, Endre; Swartz, Charles W.) *K*-convergent sequences in locally convex spaces. 91k:46001

- Chigogidze, A. Ch. Locally convex linear topological spaces that are homeomorphic to the powers of the real line. 91m:46003

- Chun, Bu Zhen *see* Antosik, Piotr; et al., 91k:46001

- Gao, Qi *see* Wu, Cong Xin, 91j:46001

- Kramer, Edvard A characterization of *H*-locally convex spaces. 91m:46004

- Kucera, Jan Quasi-bounded sets. 91m:46005

Kye, Seung-Hyeok Continuities of the evaluation maps of locally convex spaces into their biduals. 91f:46004

López Pellicer, M. see Sánchez Ruiz, L. M., 91k:46002

Lu, Li Rong see Antosik, Piotr; et al., 91k:46001

Melikhov, S. N. Some properties of canonical inductive limits. (Russian) 91b:46003

Nakhmanson, L. B. The Lindelöf property and the tightness of a locally convex space. 91g:46001

Pap, Endre see Antosik, Piotr; et al., 91k:46001

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— (with López Pellicer, M.) Strong barrelledness properties in  $l_p^\infty(X, \mathcal{M})$  and bounded finite additive measures. 91h:46002

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#### 46A11 Spaces determined by compactness or summability properties (nuclear spaces, Schwartz spaces, Montel spaces, etc.)

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- Aytuna, Aydin (with Krone, J.; Terzioğlu, Tosun) Imbedding of power series spaces and spaces of analytic functions. 91e:46012  
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### 46A16 Not locally convex spaces (metrizable topological linear spaces, locally bounded spaces, quasi-Banach spaces, etc.)

- Bayoumi, Aboubakr The theory of bounding subsets of topological vector spaces without convexity condition. 91m:46014  
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- Butzmann, H.-P. Convergence structures in functional analysis. 91d:46002  
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- Abreu, J. (with Etcheberry, A.) Hahn-Banach and Banach-Steinhaus theorems for convex processes. 91g:46007  
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- Ariño, Miguel A. Bounded Schauder decompositions in  $p$ -Banach spaces. 91h:46009  
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 — (with Grigore, Gheorghe; Niculescu, Constantin P.; Păltineanu, Gavril; Popa, Nicolae; Vuza, Dan Tudor) Structuri de ordine în analiza funcțională. Vol. 2. (Romanian) [Order structures in functional analysis. Vol. 2] 91c:46003  
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- Wei, Guo Qiang (with Xue, Yi Feng) The  $C^*$ -algebra generated by strong  $\Theta$ -operators and its  $K$ -theory. 91g:47035
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- Dădărlat, Marius (with Némethi, András) Shape theory and (connective)  $K$ -theory. 91j:46092
- Némethi, András see Dădărlat, Marius, 91j:46092
- Sharipov, F. (with Zhurav, Yu. I.) Index of elliptic operators over a  $C^*$ -algebra. (Russian) 91k:46098
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- Natsume, Toshikazu (with Nest, Ryszard) The cyclic cohomology of compact Lie groups and the direct sum formula. 91k:22017
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- Phillips, N. Christopher  $K$ -theory and noncommutative homotopy theory. (see 91g:47002)
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- Bellissard, Jean (with Vittot, Michel) Heisenberg's picture and noncommutative geometry of the semiclassical limit in quantum mechanics. (French summary) 91f:81035
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- Enriquez, Benjamin Sur le théorème de Gauss-Bonnet pour les feuilletages avec mesure harmonique. (English summary) [On the Gauss-Bonnet theorem for foliations with a harmonic measure] 91g:58280
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- Maass, Yu. I. ★ Quantum groups and noncommutative geometry. 91c:17001
- Masuda, Tetsuya (with Nakagami, Yoshiomi; Watanabe, Junsei) Noncommutative differential geometry on the quantum  $SU(2)$ . I. An algebraic viewpoint. 91j:58016
- Mathai, Varghese (with Carey, Alan L.)  $L^2$ -acyclicity and  $L^2$ -torsion invariants. 91c:58187
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- Bragiel, Kazimierz The twisted  $SU(N)$  group. On the  $C^*$ -algebra  $C(S_p(N))$ . 91b:46088
- Podleś, Piotr (with Woronowicz, S. L.) Quantum deformation of Lorentz group. 91f:46100
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- Salinas, Norberto (with Shu, Albert Jiu-Liang; Upmeyer, Harald) Toeplitz operators on pseudocovex domains and foliation  $C^*$ -algebras. 91c:47026
- Shu, Albert Jiu-Liang see Salinas, Norberto; et al., 91c:47026
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- Yetter, David N. Quantum groups and representations of monoidal categories. 91k:16028
- Zakrzewski, Stanisław Quantum and classical pseudogroups. I. Union pseudogroups and their quantization. 91m:58012
- Quantum and classical pseudogroups. II. Differential and symplectic pseudogroups. 91m:58013

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- Blecher, David P. (with Paulsen, Vern I.) Explicit construction of universal operator algebras and applications to polynomial factorization. 91j:46093
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- Items with secondary classifications in 46L99
- Adams, Scott Trees and amenable equivalence relations. 91d:28041

- Antoine, Jean-P. (with Inoue, Atsushi; Trapani, Camillo) Partial  $\ast$ -algebras of closable operators. I. The basic theory and the abelian case. 91b:47047
- Arazy, Jonathan (with Solel, Baruch) Isometries of nonselfadjoint operator algebras. 91c:47085
- Ayupov, Sh. A. (with Yagorov, N. Zh.) Spectral convex sets in finite-dimensional spaces. (Russian) 91a:46010
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- Bekka, Mohammed E. B. Amenable unitary representations of locally compact groups. 91j:22007
- Bhatt, Subhash J. Normal homomorphisms for a class of unbounded operator algebras. 91b:47101
- Blasco De La Cruz, Oscar (with Pelczyński, A.) Theorems of Hardy and Paley for vector-valued analytic functions and related classes of Banach spaces. 91c:46020
- Bożejko, Marek Positive-definite kernels, length functions on groups and a noncommutative von Neumann inequality. 91f:43011
- Bratteli, Ola (with Robinson, Derek W.) Second-order elliptic operators and heat kernels on Lie groups. 91j:22002
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- Cordes, H. O. On the technique of comparison algebra for elliptic boundary problems on noncompact manifolds. 91b:58115
- Curto, Raúl E. (with Muhly, Paul S.; Xia, Jingbo) Random Toeplitz and Hankel operators. 91b:47046
- Davidson, Kenneth R. (with Herrero, Domingo A.; Salinas, Norberto) Quasidiagonal operators, approximation, and  $C^*$ -algebras. 91b:47033
- Dobovšek, Mirko Quadratic equation in unital  $C^*$ -algebra. 91d:46068
- Douglas, Ronald G. (with Hurder, Steven; Kaminker, Jerome) Cyclic cocycles, renormalization and eta-invariants. 91m:58152
- Dubois-Violette, Michel (with Kerner, Richard; Madore, John) Classical bosons in a noncommutative geometry. 91c:81056
- Effros, Edward G. (with Ruan, Zhong-jin) On nonselfadjoint operator algebras. 91c:47086
- Girard, Jean-Yves Geometry of interaction. I. Interpretation of system F. 91f:03054
- Grabowski, Janusz Quantum  $SU(2)$  group of Woronowicz and Poisson structures. 91g:16027
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- Han, De Guang Bimodules of reflexive operator algebras. II. (Chinese) 91j:47051
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- Kalyuzhnyi, A. A. see Vainerman, L. I., 91c:46076
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- Keller, Karsten Orthoposets of extreme points of order-intervals. 91f:06010
- Kerner, Richard see Dubois-Violette, Michel; et al., 91c:81056
- Kerov, S. V. see Volchegurskii, V. I., 91c:05015
- Khelemskii, A. Ya. Some remarks about ideas and results of topological homology. 91c:46099
- Lambson, M. S. On the rank of operators in reflexive algebras. 91b:47104
- Li, Rong Lu (with Wu, Li Zhong) Pietsch and quasi-Pietsch integral operators. 91m:47061
- Lorentz, Kai On the local structure of the similarity orbits of Jordan elements in operator algebras. 91b:47102
- Ladwig, Jean On the behaviour of sequences in the dual of a nilpotent Lie group. 91j:22012
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- Mele, Severino T. A comparison algebra on a cylinder with semi-periodic multiplications. 91f:47072
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- Pincus, Joel D. (with Xia, Daoxing) Toeplitz type operators, determining functions, principal functions, and trace formulas. 91b:47052
- Ricker, Werner J. (with Schaefer, Helmut H.) The uniformly closed algebra generated by a complete Boolean algebra of projections. 91b:47081
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- Robinson, Derek W. The heat semigroup and integrability of Lie algebras: Lipschitz spaces and smoothness properties. 91f:17012
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- Salinas, Norberto The  $\bar{\partial}$ -formalism and the  $C^*$ -algebra of the Bergman  $n$ -tuple. 91b:47054
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- Wang, Xiao Ming Commutants of reductive algebras and a characterization of the property (P). (Chinese) 91d:47005
- Wassermann, Antony Cyclic cohomology of algebras of smooth functions on orbifolds. 91c:58135
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- Zimakov, N. P. Intrinsic characterization of  $AO^*$ -algebras. (Russian) (see 91b:00031)

## 46Mxx Methods of category theory in functional analysis [see also 18–XX]

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- Khelemskii, A. Ya. ★ Банаховы и полнормированные алгебры: общая теория, представления, гомологии. (Russian) [Banach and polynormed algebras: general theory, representations, homology] 91b:46001

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- Blecher, David P. Tensor products which do not preserve operator algebras. 91b:46086
- Dubin, Daniel A. (with Hennings, Mark A.) Regular tensor algebras. 91g:46079
- (with Hennings, Mark A.) Symmetric tensor algebras and integral decompositions. 91g:46080
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- Berezanskii, Yu. M. (with Kondrat'ev, Yu. G.) ★ Спектральные методы в бесконечномерном анализе. (Russian) [Spectral methods in infinite-dimensional analysis] 91b:46002
- Bierstedt, Klaus-D. (with Bonet, José) Density conditions in Fréchet and (DF)-spaces. 91m:46006
- Blecher, David P. (with Paulsen, Vern I.) Explicit construction of universal operator algebras and applications to polynomial factorization. 91j:46093
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- Díaz Alcalde, Juan Carlos (with Miñarro, María A.) Distinguished Fréchet spaces and projective tensor product. (Turkish summary) 91m:46007
- Dineen, Séan (with Timoney, Richard M.) Absolute bases, tensor products and a theorem of Bohr. 91e:46006
- Dutta, Tarini Kumar Hermitian elements in projective tensor products. 91b:46047
- Effros, Edward G. (with Exel, Ruy) On multilinear double commutant theorems. 91b:46104
- (with Ruan, Zhong-jin) On nonselfadjoint operator algebras. 91c:47086
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- (with Labuschagne, C. C. A.) An  $f$ -algebra approach to the Riesz tensor product of Archimedean Riesz spaces. 91d:46005
- Hauschild, Wilfried (with Kaniuth, Eberhard; Voigt, Andreas)  $\ast$ -regularity and uniqueness of  $C^*$ -norm for tensor products of  $\ast$ -algebras. 91e:46075
- Jo, Young Soo Factorization of automorphisms on tensor product of algebras. I. 91e:47092
- Kaniuth, Eberhard see Hauschild, Wilfried; et al., 91e:46075
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- Kosha, Omran Sur l'interpolation des produits tensoriels projectifs ou injectifs d'espaces de Banach. (English summary) [On the interpolation of projective or injective tensor products of Banach spaces] 91e:46104
- Labuschagne, C. C. A. see Grobler, J. J., 91d:46005 and 91d:46021
- Li, Chi-Kwong (with Tsing, Nam-Kiu) Norms on Cartesian product of linear spaces. 91b:46028
- Maestre, M. see Bonet, José, 91m:46031
- Meĭnikov, E. V. Bilinear mappings of locally convex spaces. 91f:46008
- Miñarro, María A. see Díaz Alcalde, Juan Carlos, 91m:46007
- Mingo, James A. Inner completely positive maps on von Neumann algebras. (see 91g:47002)
- On the nonisomorphism of  $C_1^*(G) \otimes_{\max} C_2^*(G)$  and  $C^*(C_1^*(G), C_2^*(G))$ . 91m:46086
- Moscattelli, Vincenzo Bruno Strongly nonnorming subspaces and preprojections. 91b:46030
- Pannenberg, Michael Positive operators on tensor products which are the tensor product of their restrictions. 91b:47085
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- Power, Stephen Infinite tensor products of upper triangular matrix algebras. 91b:46105
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- Rao, T. S. S. R. K. (with Roy, Ashoke K.; Sundaresan, K.) Intersection properties of balls in tensor products of some Banach spaces. 91g:46019
- Intersection properties of balls in tensor products of some Banach spaces. II. 91g:46020
- Roy, Ashoke K. see Rao, T. S. S. R. K.; et al., 91g:46019
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- see also Effros, Edward G., 91c:47086
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- Stavarakas, G. A. Tensor products of topological algebras and analytic sets. 91g:46054
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- Wassermann, Simon Tensor products of free-group  $C^*$ -algebras. 91b:46103
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- Zaki, Adel M. Primal ideals and tensor product of  $C^*$ -algebras. 91m:46090

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- Domański, Paweł  $\mathcal{L}_p$ -spaces and injective locally convex spaces. 91j:46002
- Jarosz, Krzysztof Ultraproducts and small bound perturbations. 91m:46022
- Tokarev, E. V. On the problem of envelopes of locally convex spaces. 91f:46005

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- Christianson, Bruce Inverse systems of abstract Lebesgue spaces. 91b:46072

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- Chan, Khuen see Smirnov, V. A., 91g:46082
- Filippov, O. G. Reflexivity of objects in some concrete categories. 91b:46121
- Higgs, Denis Remarks on duality for  $\Sigma$ -groups: Banach and Hilbert spaces. 91g:46081
- Min, K. C. (with Nel, Louis Daniel<sup>1</sup>) Intrinsic functional analysis of sequential convergence spaces. 91f:46101
- Nel, Louis Daniel<sup>1</sup> see Min, K. C., 91f:46101
- Smirnov, V. A.<sup>2</sup> (with Chan, Khuen) On the functor Ext in the category of linear topological spaces. 91g:46082
- Waelbroeck, L. Quotient Fréchet spaces. 91j:46094
- Wild, F. G. J. Sheaf representation of normed spaces. 91j:46095
- Yonace, Matthew B. The infimum of Cauchy structures with applications in operator theory. 91m:46116

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- Ball, Richard N. (with Hager, Anthony W.) Epicomplete Archimedean  $l$ -groups and vector lattices. 91c:46009
- Beattie, R. (with Butzmann, H.-P.; Schroder, Mark) Choquet spaces and groups. 91b:46020
- Botnaru, D. V. Free objects in reflexive subcategories. (Russian) 91d:18005
- Butzmann, H.-P. see Beattie, R.; et al., 91b:46020
- Cohoon, D. K. On the minimal space of surjectivity question for linear transformations on vector spaces with applications to surjectivity of differential operators on locally convex spaces. 91j:47002
- Faure, Claude-Alain (with Frölicher, Alfred) Hölder differentiable maps and their function spaces. 91f:46058
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- Hager, Anthony W. see Ball, Richard N., 91c:46009
- Kandielaki, T. K. On  $C^*$ -pseudocategories. (Russian. English and Georgian summaries) 91j:46091
- Kleisli, Heinrich The convolution of measures viewed from enriched category theory. 91g:43010
- Kriegel, A. (with Michor, Peter W.; Schachermayer, W.) Characters on algebras of smooth functions. 91b:46046
- Michor, Peter W. see Kriegel, A.; et al., 91b:46046
- Nel, Louis Daniel<sup>1</sup> Categorical differential calculus and Banach-Steinhaus. 91b:46081
- Pelletier, Joan Wick (with Rosický, Jiří) Generating the equational theory of  $C^*$ -algebras and related categories. 91j:46068
- Poppenberg, Markus Characterization of the subspaces of  $(s)$  in the tame category. 91b:46011
- Rosický, Jiří see Pelletier, Joan Wick, 91j:46068
- Schachermayer, W. see Kriegel, A.; et al., 91b:46046
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## 46M20 Methods of algebraic topology (cohomology, sheaf and bundle theory, etc.) [see also 14F05, 18Fxx, 19Kxx, 32Cxx, 32Lxx, 46L80, 55Rxx]

- Anno, E. I. (with Krichevets, A. N.) The small global dimension of the algebra  $C(\Omega)$  and the continuum hypothesis. (Russian) 91g:46083
- Carey, Alan L. (with Evans, David E.) Algebras almost commuting with Clifford algebras. 91b:46122
- Deferrari, G. (with Larotonda, A.; Zalduendo, Ignacio) Sheaves and functional calculus. 91b:46091
- Douglas, Ronald G. (with Paulsen, Vern I.) ★ Hilbert modules over function algebras. 91j:46084
- Evans, David E. see Carey, Alan L., 91b:46122
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 Müller, Thomas  $C^*$ -semigroup bundles and  $C^*$ -algebras whose irreducible representations are all finite-dimensional. 91i:46090  
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- Allan, G. R. Locally inner derivations. 91c:46066  
 Applebaum, David Quantum stochastic parallel transport on noncommutative vector bundles. 91d:46087  
 Aytuna, Aydın The Fréchet space structure of global sections of certain coherent analytic sheaves. 91d:46025  
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- Day, Brian J. Onto Gelfand maps: appendix to "Onto Gelfand transformations" [Cahiers Topologie Géom. Différentielle Catégoriques 28 (1987), no. 3, 227–234; MR 89e:18015]. (French summary) 91c:18004
- Henriksen, Melvin (with Woods, R. Grant)  $F$ -spaces and sub-Stonian spaces: general topology as a tool in functional analysis. 91b:54051
- Kusraev, A. G. (with Malyugin, S. A.) Product and projective limit of vector measures. (Russian) 91k:46043
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- Mathieu, Martin Rings of quotients of ultraprime Banach algebras, with applications to elementary operators. 91a:46054
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- Krée, Paul Stochastic analysis, mathematical structures and distributions methods. (see 91a:00025)
- Popescu, Mihai-Emilian (with Popescu, Tina) Functional analysis methods in the study of the optimal transfer. (Not in MR)
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- (with Brown, Donald J.; Burkinshaw, Owen) Valuation and optimality in the overlapping generations model. 91g:90031
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- Bouchitté, Guy (with Buttazzo, Giuseppe) New lower semicontinuity results for nonconvex functionals defined on measures. 91j:49017
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- Buttazzo, Giuseppe see Bouchitté, Guy, 91j:49017
- Chang, Hsu Yü On the Nash equilibrium. 91m:90028
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- Dinh Thé Luc Recession cones and the domination property in vector optimization. 91i:46012
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- Lai, Han Ch'ing (with Lin, Lai Chü) Optimality for set functions with values in ordered vector spaces. 91c:90121
- Levine, David K. see Kehoe, Timothy J.; et al., 91a:90044
- Lin, Lai Chü see Lai, Han Ch'ing, 91c:90121
- Mas-Colell, Andreu see Kehoe, Timothy J.; et al., 91a:90044
- Neumann, Michael M. Some unexpected applications of the sandwich theorem. 91j:90091
- Roux, Delfina (with Singh, Sankatha Prasad) On a best approximation theorem. 91m:41059
- Singh, Sankatha Prasad see Roux, Delfina, 91m:41059
- Sun, You Min A normed space arising from problems of distribution of materials and products. (Chinese) 91f:90045
- Świerniak, Andrzej P. What is optimal in an uncertain environment? (see 91a:00032)



- Vedina, O. I. Spectral properties of superlinear mappings. (Russian. English and Lithuanian summaries) 91g:90041
- Yuan, Xian Zhi Variational methods in random analysis. (Not in MR)
- Zame, William R. *see* Kehoe, Timothy J.; et al. 91a:90044
- Zhang, Shi Sheng (with Zhu, Yuan Guo) On variational inequalities for fuzzy mappings. 91a:47091
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- Bohm, Arno (with Gadella, M.) ★ Dirac kets, Gamow vectors and Gelfand triplets. 91d:81003
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- *see also* Beltrametti, Enrico G.; et al. 91a:81017
- Cirelli, Renzo (with Maniá, Alessandro; Pizzocchero, Livio) Quantum mechanics as an infinite-dimensional Hamiltonian system with uncertainty structure. I, II. 91k:81076
- Dorfmeister, G. Comparison of subtraction terms in two renormalization schemes. 91E81110
- Estrada, Ricardo (with Gracia-Bondía, José M.; Várilly, Joseph C.) On asymptotic expansions of twisted products. 91c:46057
- Gadella, M. *see* Bohm, Arno. 91d:81003
- Gálindo, A. Spin of the fundamental state. (Spanish) 91g:81056
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- Hilbert lattices: new results and unsolved problems. 91j:06019
- Grudziński, Hubert ★ A study of the convex structure of the set of fermion  $N$ -representable 2-density operators. 91e:81051
- He, Jian E A form of adiabatic hypothesis and its application. (Chinese. English summary) 91g:81032
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- Parthasarathy, Kalyanapuram Rangachari *see* Lindsay, J. M. 91h:46115
- Peetre, Jaak The Berezin transform and Ha-plitz operators. 91k:47058
- Pierotti, D. *see* Morchio, G.; et al. 91f:81087
- Pirizak, Robert Lattice theory, quadratic spaces, and quantum proposition systems. 91h:66021
- Pizzocchero, Livio *see* Cirelli, Renzo; et al. 91k:81076
- Pothoff, J. *see* Hida, Takeyuki; et al. 91i:81038
- Rabitzyn, Szymon Deficiency indices for Wick powers in one dimension. 91i:81040
- Roberts, John E. *see* Löders, Christian. 91j:81053
- Sharma, C. S. (with Almeida, D. F.) A direct proof of Wigner's theorem on maps which preserve transition probabilities between pure states of quantum systems. 91a:81007
- Slowikowski, Wojtek (with Malmgren, Klaus) Squeezing of free Bose fields. 91j:81028
- Streit, Ludwig *see* Hida, Takeyuki; et al. 91i:81038
- Strocchi, Franco *see* Morchio, G.; et al. 91f:81087
- Truini, P. *see* Cassinelli, Gianni; et al. 91d:22009
- Tsukada, Haruo String path integral realization of vertex operator algebras. 91m:17044
- Varadarajan, V. S. *see* Cassinelli, Gianni; et al. 91d:22009
- Várilly, Joseph C. *see* Estrada, Ricardo; et al. 91c:46057
- Wiczerkowski, Christian *see* Jaffe, Arthur M.; et al. 91d:81083
- Yngvason, Jakob *see* Borchers, H.-J. 91j:46063

#### 46N55 Applications in statistical physics

Items with secondary classifications in 46N55

- Lieb, Elliott H. Kinetic energy bounds and their application to the stability of matter. 91a:82045
- Sewell, Geoffrey L. Quantum macrostatistics and irreversible thermodynamics. 91m:82111

#### 46N99 None of the above, but in this section

Grabiner, Sandy Using Banach algebras to do analysis with the umbral calculus. 91j:46097

Items with secondary classifications in 46N99

- (Appell, Jürgen) *see* Krasnosel'skii, M. A.; et al. 91f:47051
- Baggett, Lawrence W. A functional analytic proof of a Borel selection theorem. 91k:54032
- Bożejko, Marek Positive-definite kernels, length functions on groups and a noncommutative von Neumann inequality. 91d:43011
- Cook, Thirlow A. *see* Olubummo, Yewande. 91j:81010
- Dinh Dung The Whittaker-Kotel'nikov-Shannon theorem,  $\epsilon$ -entropy and  $\epsilon$ -dimensionality. 91j:41035
- Efimov, Aleksandr Vasilievich Multiplicative function systems and their application in discrete information processing. 91m:94002
- Elliott, P. D. T. A. Applications of elementary functional analysis to the study of arithmetic functions. 91E11067
- Gérard, Jean-Yves Geometry of interaction. I. Interpretation of system F. 91f:03054
- Jørgensen, Palle E. T. Extensions of positive definite integral kernels on the Heisenberg group. 91m:22013
- Krasnosel'skii, M. A. (with Lifshits, E. A.; Sobolev, A. V.) ★ Positive linear systems. 91f:47051
- Lehtinen, Markku S. (with Päivärinta, Lassi; Somersalo, Erkki) Linear inverse problems for generalised random variables. 91g:65129
- Lifshits, E. A. *see* Krasnosel'skii, M. A.; et al. 91f:47051
- Navara, Mirko (with Pták, Pavel) Enlargements of logics ( $\sigma$ -orthocomplete case). 91E03125
- Olubummo, Yewande (with Cook, Thirlow A.) Operational logics and the Hahn-Jordan property. 91j:81010
- Päivärinta, Lassi *see* Lehtinen, Markku S.; et al. 91g:65129
- Pták, Pavel *see* Navara, Mirko. 91f:03125
- Shabanov-Kushnarenko, Yu. P. (with Shlyakhov, V. V.) Characteristic properties of linear predicates in Hilbert spaces. (Russian. English summary) (Not in MR)
- Shlyakhov, V. V. *see* Shabanov-Kushnarenko, Yu. P. (Not in MR)
- Sobolev, A. V. *see* Krasnosel'skii, M. A.; et al. 91f:47051
- Somersalo, Erkki *see* Lehtinen, Markku S.; et al. 91g:65129
- (Trzeciak, Jerzy) *see* Efimov, Aleksandr Vasilievich. 91m:94002
- Varadarajan, V. S. ★ An introduction to harmonic analysis on semisimple Lie groups. 91m:22018
- van Wickeren, Erich Sequential convergence in the space of functions Riemann integrable on arbitrary sets. 91g:28006

Yu, Xiaokang Radon-Nikodým theorem is equivalent to arithmetical comprehension. 91h:03085

## 46Sxx Other (nonclassical) types of functional analysis [see also 47Sxx]

### 46S10 Functional analysis over fields other than $\mathbb{R}$ or $\mathbb{C}$ or the quaternions; non-Archimedean functional analysis [see also 12J25, 32P05]

- Grybowski, Jerzy On  $(s, t)$ -convex modulars over a field with valuation. 91h:46094  
 Hare, Kathryn E. (with Shirvani, Maziar) The semisimplicity problem for  $p$ -adic group algebras. 91h:46126  
 Katsaras, A. K. On non-Archimedean locally convex spaces. 91c:46102  
 — On non-Archimedean sequence spaces. 91h:46127  
 Khrennikov, A. Yu. Mathematical methods in non-Archimedean physics. 91h:46128  
 Lewis, John L. Extensions of functionals on octonionic linear spaces. 91c:46103  
 Natarajan, P. N. Continuous duals of certain sequence spaces and the related matrix transformations over non-Archimedean fields. 91d:46095  
 Pombo, Dinamérico P., Jr. Compact polynomials on non-Archimedean Banach spaces. 91g:46086  
 Shirvani, Maziar see Hare, Kathryn E., 91h:46126  
 Zou, Jin Weighted  $H^p(w)$  spaces on local fields. 91c:46104

Items with secondary classifications in 46S10

- Ameziane, Hassani Rachid Espaces de suites sur un module  $\beta$  et  $\gamma$ -dualité. [Spaces of sequences over a  $\beta$  module and  $\gamma$ -duality] 91d:46008  
 Berkovich, Vladimir G. ★ Spectral theory and analytic geometry over non-Archimedean fields. 91k:32038  
 Bhaskaran, R. (with Karunakaran, V.) Analytic functions over valued fields. 91m:12014  
 De Grande-De Kimpe, N. (with Martínez-Maurica, Javier) Compact-like operators between non-Archimedean normed spaces. 91h:47041  
 Eda, Katsuya (with Kiyosawa, Takemitsu; Ohta, Haruto)  $N$ -compactness and its applications. 91m:54018  
 El Yacoubi, Mohammed Sur les modules normés quasi-injectifs. [On quasi-injective normed modules] 91d:46058  
 Karunakaran, V. see Bhaskaran, R., 91m:12014  
 Keller, Hans A. Measures on infinite-dimensional orthomodular spaces. 91g:28019  
 Khrennikov, A. Yu. Pseudodifferential operators on non-Archimedean spaces. 91h:47056  
 — Schrödinger and Bargmann-Fock representations in non-Archimedean quantum mechanics. 91k:81046  
 — Quantum mechanics over non-Archimedean number fields. 91g:81033  
 Kiyosawa, Takemitsu see Eda, Katsuya; et al., 91m:54018  
 Lebedev, D. R. (with Morozov, A. Yu.)  $p$ -adic one-loop calculations. 91h:81111  
 Martínez-Maurica, Javier (with Pellón, Teresa; Pérez-García, Cristina) Some characterizations of  $p$ -adic semi-Fredholm operators. 91k:47175  
 — see also De Grande-De Kimpe, N., 91h:47041  
 Morozov, A. Yu. see Lebedev, D. R., 91h:81111  
 Ohta, Haruto see Eda, Katsuya; et al., 91m:54018  
 Pellón, Teresa see Martínez-Maurica, Javier; et al., 91k:47175  
 Pérez-García, Cristina Semi-Fredholm operators and the Calkin algebra in  $p$ -adic analysis. I, II. 91k:47176  
 — see also Martínez-Maurica, Javier; et al., 91k:47175  
 Pestov, V. G. On a valued field introduced by A. Robinson, and structures connected with it. (Russian) 91c:03031  
 Rangachari, M. S. see Srinivasan, V. K., 91m:40004  
 Saakyan, D. B. Numerical study of the two-dimensional Ising model with a  $p$ -adic coupling constant. 91k:82016  
 Srinivasan, V. K. (with Rangachari, M. S.) Summability methods in valued fields. 91m:40004  
 Srivastava, Arun Kumar<sup>2</sup> Note on fuzzy uniformities induced by non-Archimedean metrics. 91h:54010  
 Tateoka, Jun  $C_p$ -estimates for certain kernels on the ring of integers over a local field,  $0 < p \leq 1$ . 91k:47059  
 Tazoni, Sergio A. Vector singular integral operators on a local field. 91h:43011  
 Wysocki, Hubert On a generalization of the Hilbert space. 91d:46024

### 46S20 Nonstandard functional analysis [see also 03H05]

- Kutateladze, S. S. New possibilities of  $K$ -spaces. (see 91h:00023)  
 (Leifman, Lev J.) see Kutateladze, S. S., (91h:00023)

Items with secondary classifications in 46S20

- Brunet, Bernard An elementary nonstandard proof of Stone's representation theorem. 91m:46032  
 Cutland, Nigel J. Transfer theorems for  $\pi$ -monads. 91c:03050  
 Gordon, E. I. On the Fourier transform in nonstandard analysis. 91g:42006  
 Kinoshita, Moto-o Nonstandard representations of distributions. II. 91m:46054  
 Pestov, V. G. On a valued field introduced by A. Robinson, and structures connected with it. (Russian) 91c:03031  
 — On a "super" version of Lie's third fundamental theorem. 91a:58016  
 Sam, Yengeng A Banach space in which a ball is contained in the range of some countably additive measure is superreflexive. 91a:46018

### 46S30 Constructive functional analysis [see also 03F65]

Items with secondary classifications in 46S30

- Bridges, Douglas S. (with Ishihara, Hajime) Linear mappings are fairly well-behaved. 91c:47129  
 Ishihara, Hajime see Bridges, Douglas S., 91c:47129

### 46S40 Fuzzy functional analysis [see also 04A72]

- Ahsanullah, T. M. G. see Khodadad Khan, A. F. M., 91g:46087  
 Khodadad Khan, A. F. M. (with Ahsanullah, T. M. G.) Fuzzy differentiation in fuzzy neighborhood linear spaces. I. 91g:46087  
 Ma, Ming see Wu, Cong Xin, 91k:46090  
 Wu, Cong Xin (with Ma, Ming) Fuzzy norms, probabilistic norms and fuzzy metrics. 91k:46090  
 Zeng, Huan Lian Fuzzy topological linear spaces of types (L) and (L\*). (Chinese. English summary) 91f:46108

Items with secondary classifications in 46S40

- Srivastava, Arun Kumar<sup>2</sup> Note on fuzzy uniformities induced by non-Archimedean metrics. 91h:54010  
 Weng, Wen Hui Bases of fuzzy linear spaces. (Chinese. English summary) 91a:46012

### 46S50 Functional analysis in probabilistic metric linear spaces

- Ding, Zuo Hua Probabilistic inner-product spaces. (Chinese) 91f:46109  
 Gong, Hual Yun see Guo, Tie Xin; et al., 91j:46098  
 Guo, Tie Xin (with Lin, Xi; Gong, Hual Yun) A uniform boundedness principle for probabilistic normed linear spaces. (Chinese. English summary) 91j:46098  
 Lin, Xi see Guo, Tie Xin; et al., 91j:46098  
 Ying, Ming Sheng On probabilistic normed spaces under  $\tau_{FL}$ . 91m:46121

Items with secondary classifications in 46S50

- Fernández Rodríguez, Rosa M. Orthogonality in generalized normed spaces. (Spanish. English summary) 91c:46031  
 — A note on generalized  $B$ -normed spaces. (Spanish. English summary) 91c:46032  
 Ma, Ming see Wu, Cong Xin, 91k:46090  
 Świerniak, Andrzej P. What is optimal in an uncertain environment? (see 91c:00032)  
 Wu, Cong Xin (with Ma, Ming) Fuzzy norms, probabilistic norms and fuzzy metrics. 91k:46090

### 46S99 None of the above, but in this section

Items with secondary classifications in 46S99

- Wild, F. G. J. Sheaf representation of normed spaces. 91j:46095

## 47-XX Operator theory

### 47-00 General reference works (handbooks, dictionaries, bibliographies, etc.)

- (Halmos, Paul R.) see Reviews in operator theory, 91a:47001

Items listed otherwise than by author

- Reviews in operator theory ★ Reviews in operator theory 1980–86. Vol. 1–4. 91a:47001

Items with secondary classifications in 47-00

- (Johnson, William B.) see Reviews in functional analysis, 91a:46001

Items listed otherwise than by author

- Reviews in functional analysis ★ Reviews in functional analysis 1980–86. Vol. 1–4. 91a:46001

### 47-01 Instructional exposition (textbooks, tutorial papers, etc.)

- (Cooke, Roger Marvin) see Sadovnichii, V. A., 91m:47001  
 DeVito, Carl L. ★ Functional analysis and linear operator theory. 91f:47001  
 Sadovnichii, V. A.<sup>1</sup> ★ Theory of operators. 91m:47001

Items with secondary classifications in 47-01

- (Amson, John C.) see Dautray, Robert, 91h:00004a  
 (Artola, Michel) see Dautray, Robert, 91h:00004a  
 Bayen, François (with Margaria, Christian) ★ Problèmes de mathématiques appliquées. Tome 2. (French) [Applied mathematics problems. Vol. 2] 91h:00006  
 (Bensoussan, Alaïa) see Sametli, M., 91c:46002  
 (Boron, Leo F.) see Riesz, Frigyes, 91g:00002  
 (Cessenat, Michel) see Dautray, Robert, 91h:00004a  
 Choudhary, B. (with Nanda, Sudarsan) ★ Functional analysis with applications. 91c:46001  
 Conway, John B. ★ A course in functional analysis. 91c:46001  
 Dautray, Robert (with Lions, Jacques-Louis) ★ Mathematical analysis and numerical methods for science and technology. Vol. 3. 91h:00004a  
 Debnath, Lokenath (with Mikusiński, Piotr) ★ Introduction to Hilbert spaces with applications. 91f:46001  
 Huppert, Bertram ★ Angewandte lineare Algebra. (German) [Applied linear algebra] 91f:15002

- Kato, Tosio ★ Iso kaiseki. (Japanese) [Topological analysis] 91c:46002  
 Lebedev, V. I. ★ Функциональный анализ и вычислительная математика. (Russian) [Functional analysis and numerical mathematics] 91g:00001  
 Lions, Jacques-Louis ★ see Dautray, Robert, 91h:00004a  
 Margaria, Christian ★ see Bayen, François, 91h:00006  
 Mikusiński, Piotr ★ see Debnath, Loknath, 91f:46001  
 Nanda, Sudarsan ★ see Choudhary, B., 91c:46001  
 Riesz, Frigyes (with Szökefalvi-Nagy, Béla) ★ Functional analysis. 91g:00002  
 Samuëlides, M. (with Touzillier, L.) ★ Analyse fonctionnelle. (French) [Functional analysis] 91e:46002  
 Szökefalvi-Nagy, Béla ★ see Riesz, Frigyes, 91g:00002  
 Touzillier, L. ★ see Samuëlides, M., 91e:46002  
 Zimmer, Robert J. ★ Essential results of functional analysis. 91h:46002

#### 47-02 Research exposition (monographs, survey articles)

- Arveson, William B. Quantizing the Fredholm index. 91k:47001  
 Borun, Leo F. ★ see Zeidler, Eberhard, 91b:47001 and 91b:47002  
 Böttcher, Albrecht ★ see Nikolskii, N. K.; et al. (Not in MR)  
 Božinov, Nikolai S. ★ Convolutional representations of commutants and multipliers. 91m:47002  
 Embarek, Djilali ★ see Maslov, V. P., 91k:47003  
 Herrero, Domingo A. ★ Approximation of Hilbert space operators. Vol. I. 91k:47002  
 Maslov, V. P. ★ Méthodes opératoires. (French) [Operator methods] 91k:47003  
 Nikolskii, N. K. (with Tolokonnikov, V. A.; Treil, S. R.) Review of *Analysis of Toeplitz operators* [Springer, Berlin, 1990] by A. Böttcher and B. Silbermann. (Not in MR) (Silbermann, Bernd) ★ see Nikolskii, N. K.; et al. (Not in MR)  
 Tolokonnikov, V. A. ★ see Nikolskii, N. K.; et al. (Not in MR)  
 Treil, S. R. ★ see Nikolskii, N. K.; et al. (Not in MR)  
 Woerdeman, Hugo J. ★ Matrix and operator extensions. 91d:47001  
 Zeidler, Eberhard ★ Nonlinear functional analysis and its applications. II/A. 91b:47001  
 — ★ Nonlinear functional analysis and its applications. II/B. 91b:47002

#### Items with secondary classifications in 47-02

- Aksoy, Asuman G. (with Khamsi, Mohamed A.) ★ Nonstandard methods in fixed point theory. 91k:47073  
 Appell, Jürgen (with Zabrejko, P. P.) ★ Nonlinear superposition operators. 91k:47168  
 — see also Krasnosel'skii, M. A.; et al., 91f:47051  
 Babin, A. V. ★ Iterations of differential operators. 91j:35001  
 Berezanskii, Yu. M. (with Kondrat'ev, Yu. G.) ★ Спектральные методы в бесконечномерном анализе. (Russian) [Spectral methods in infinite-dimensional analysis] 91h:46002  
 (Conway, John B.) ★ see Operator theory, 91e:00030  
 Curto, Raúl E. Joint hyponormality: a bridge between hyponormality and subnormality. 91k:47049  
 Defant, Andreas (with Floret, Klaus) Aspects of the metric theory of tensor products and operator ideals. 91m:47065  
 Floret, Klaus ★ see Defant, Andreas, 91m:47065  
 Khamsi, Mohamed A. ★ see Aksoy, Asuman G., 91k:47073  
 Kirk, W. A. ★ see Aksoy, Asuman G., 91k:47073  
 Kondrat'ev, Yu. G. ★ see Berezanskii, Yu. M., 91h:46002  
 Krasnosel'skii, M. A. (with Lifshits, E. A.; Sobolev, A. V.) ★ Positive linear systems. 91f:47051  
 Krein, S. G. ★ see Vasil'ev, V. V.; et al., 91k:47094  
 Lifshits, E. A. ★ see Krasnosel'skii, M. A.; et al., 91f:47051  
 Longstaff, W. E. Some problems concerning reflexive operator algebras. 91k:47107  
 Martin, Mircea (with Putinar, Mihai) ★ Lectures on hyponormal operators. 91c:47041  
 McGhee, D. F. (with Picard, Rainer H.) ★ Cordes' two-parameter spectral representation theory. 91b:47023  
 McIntosh, Alan The square root problem for elliptic operators: a survey. 91j:47056  
 (Morrel, B. B.) ★ see Operator theory, 91e:00030  
 Poetter, Jaak The Berezin transform and Ha-plitz operators. 91k:47058  
 Peller, V. V. ★ see Vol'berg, A. L.; et al., 91k:47034  
 Picard, Rainer H. ★ see McGhee, D. F., 91b:47023  
 Piskar'ev, S. I. ★ see Vasil'ev, V. V.; et al., 91k:47094  
 Putinar, Mihai ★ see Martin, Mircea, 91c:47041  
 Sanchez Hubert, J. (with Sánchez-Palencia, E.) ★ Vibration and coupling of continuous systems. 91c:00018  
 Sánchez-Palencia, E. ★ see Sanchez Hubert, J., 91c:00018  
 Schmüdgen, Konrad ★ Unbounded operator algebras and representation theory. 91f:47062  
 Sobolev, A. V. ★ see Krasnosel'skii, M. A.; et al., 91f:47051  
 Valette, Alain The conjecture of idempotents: a survey of the  $C^*$ -algebraic approach. 91g:16017  
 Vasil'ev, V. V. (with Krein, S. G.; Piskar'ev, S. I.) Operator semigroups, cosine operator functions, and linear differential equations. (Russian) 91k:47094  
 Vol'berg, A. L. (with Peller, V. V.; Yakubovich, D. V.) A brief excursion into the theory of hyponormal operators. 91k:47034  
 Yakubovich, D. V. ★ see Vol'berg, A. L.; et al., 91k:47034  
 Zabrejko, P. P. ★ see Appell, Jürgen, 91k:47168  
 (Zahvi, H.) ★ see Babin, A. V., 91j:35001

#### Items listed otherwise than by author

##### Conference:

- Functional Analysis ★ Operator Theory: Proceedings of the 1988 GPOTS-Wabash Conference. 91e:00030  
 Operator Theory ★ Operator Theory: Proceedings of the 1988 GPOTS-Wabash Conference. 91e:00030  
 Indianapolis, IN ★ Operator Theory: Proceedings of the 1988 GPOTS-Wabash Conference. 91e:00030

Operator theory ★ Operator Theory: Proceedings of the 1988 GPOTS-Wabash Conference. 91e:00030

##### Proceedings:

- GPOTS-Wabash Conference ★ Operator Theory: Proceedings of the 1988 GPOTS-Wabash Conference. 91e:00030

#### 47-03 Historical (must also be assigned at least one classification number from Section 01)

Pietsch, Albrecht A historical survey of the theory of infinite determinants. 91a:47002

#### Items with secondary classifications in 47-03

- Bishop, Errett ★ Selected papers. 91b:01091  
 (Wermer, John) ★ see Bishop, Errett, 91b:01091

#### Items listed otherwise than by author

##### Bibliography:

- Bishop, Errett A. ★ see Bishop, Errett, 91b:01091

##### Biography:

- Bishop, Errett A. ★ see Bishop, Errett, 91b:01091

#### 47-06 Proceedings, conferences, collections, etc.

- (Arsene, Gr.) ★ see Linear operators in function spaces, 91i:47001  
 (Arveson, William B.) ★ see Operator theory: operator algebras and applications, 91g:47001 and 91g:47002  
 (Douglas, Ronald G.) ★ see Operator theory: operator algebras and applications, 91g:47001 and 91g:47002  
 (Helson, H.) ★ see Linear operators in function spaces, 91i:47001  
 (Szökefalvi-Nagy, Béla) ★ see Linear operators in function spaces, 91i:47001  
 (Vasilescu, F.-H.) ★ see Linear operators in function spaces, 91i:47001

#### Items listed otherwise than by author

##### Conference:

- Operator Theory ★ Linear operators in function spaces. 91i:47001  
 Durham, NH ★ Operator theory: operator algebras and applications. Part 1. 91g:47001  
 — ★ Operator theory: operator algebras and applications. Part 2. 91g:47002  
 Lawrence, KS ★ Proceedings of the Seventh Great Plains Operator Theory Seminar. 91e:47001  
 Linear operators in function spaces ★ Linear operators in function spaces. 91i:47001  
 Operator theory: operator algebras and applications ★ Operator theory: operator algebras and applications. Part 1. 91g:47001  
 — ★ Operator theory: operator algebras and applications. Part 2. 91g:47002  
 Proceedings of Symposia in Pure Mathematics ★ Operator theory: operator algebras and applications. Part 1. 91g:47001  
 — ★ Operator theory: operator algebras and applications. Part 2. 91g:47002  
 Proceedings:  
 Operator Theory Seminar ★ Proceedings of the Seventh Great Plains Operator Theory Seminar. 91e:47001

##### Research Institute:

- Operator Theory: Operator Algebras and Applications ★ Operator theory: operator algebras and applications. Part 1. 91g:47001  
 — ★ Operator theory: operator algebras and applications. Part 2. 91g:47002

##### Seminar:

- Operator Theory ★ Proceedings of the Seventh Great Plains Operator Theory Seminar. 91e:47001

Timișoara ★ Linear operators in function spaces. 91i:47001

#### Items with secondary classifications in 47-06

- (Conway, John B.) ★ see Operator theory, 91e:00030  
 (Doust, Ian) ★ see Miniconference: Operators in Analysis, 91b:00045  
 (Exner, Pavel) ★ see Schrödinger operators, standard and nonstandard, 91j:81005  
 (Jeffries, Brian) ★ see Miniconference: Operators in Analysis, 91b:00045  
 (Li, Chun) ★ see Miniconference: Operators in Analysis, 91b:00045  
 (McIntosh, Alan) ★ see Miniconference: Operators in Analysis, 91b:00045  
 (Morrel, B. B.) ★ see Operator theory, 91e:00030  
 (Seba, Petr) ★ see Schrödinger operators, standard and nonstandard, 91j:81005

#### Items listed otherwise than by author

##### Conference:

- Functional Analysis ★ Operator Theory: Proceedings of the 1988 GPOTS-Wabash Conference. 91e:00030  
 Operator Theory ★ Operator Theory: Proceedings of the 1988 GPOTS-Wabash Conference. 91e:00030  
 Schrödinger Operators, Standard and Nonstandard ★ Schrödinger operators, standard and nonstandard. 91j:81005  
 Dubna ★ Schrödinger operators, standard and nonstandard. 91j:81005  
 Evolution equations and applications to nonlinear problems ★ Hatten hōtenshiki to hisenkei mondai e no ōyō. [Evolution equations and applications to nonlinear problems] 91k:35004  
 Indianapolis, IN ★ Operator Theory: Proceedings of the 1988 GPOTS-Wabash Conference. 91e:00030  
 Miniconference:  
 Operators in Analysis ★ Miniconference on Operators in Analysis. 91b:00045  
 Operator theory ★ Operator Theory: Proceedings of the 1988 GPOTS-Wabash Conference. 91e:00030  
 Proceedings:  
 GPOTS-Wabash Conference ★ Operator Theory: Proceedings of the 1988 GPOTS-Wabash Conference. 91e:00030



Schrödinger operators, standard and nonstandard ★ Schrödinger operators, standard and nonstandard. 91j:81005

Sydney ★ Miniconference on Operators in Analysis. 91b:00045

Symposium:

Evolution Equations and Applications to Nonlinear Problems ★ Hatten hōteishiki to hisenkei mondai e no ōyō. [Evolution equations and applications to nonlinear problems] 91k:35004

## 47Axx General theory of linear operators

Items with secondary classifications in 47Axx

Karadzhov, Georgi E. Spectral asymptotics for Toeplitz matrices generated by the Poisson-Charlier polynomials. (Not in MR)

## 47A05 General (adjoints, conjugates, products, inverses, domains, ranges, etc.)

Azbelev, N. V. (with Islamov, G. G.) Structural properties of operators and functional-differential equations. (Russian) 91h:47001

Brock, K. G. A note on commutativity of a linear operator and its Moore-Penrose inverse. 91j:47001

Cohoon, D. K. On the minimal space of surjectivity question for linear transformations on vector spaces with applications to surjectivity of differential operators on locally convex spaces. 91j:47002

Cross, R. W. Unbounded linear transformations of upper semi-Fredholm type in normed spaces. 91h:47002

Dye, John M. (with Khamsi, Mohamed A.; Reich, Simeon) Random products of contractions in Banach spaces. 91h:47003

García Castellón, Felicitimo Géométrie et continuité dans les espaces de Banach séparables. (English summary) [Geometry and continuity in separable Banach spaces] 91h:47004

Harte, Robin Algebra is everywhere. 91f:47002

Islamov, G. G. Some applications of the theory of an abstract functional-differential equation. I. 91k:47004

— Some applications of the theory of an abstract functional-differential equation. II. 91k:47005

— see also Azbelev, N. V., 91h:47001

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## 47G05 Integral, integro-differential, and pseudodifferential operators (1985)[see also 35Sxx, 45P05, 58Gxx]

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- Saichev, A. I. see Repin, O. N., 91g:00034
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- Zhdanek, T. A. On the measurability of an operator that is inverse to a random linear operator. 91d:60148

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- Bondar, A. V. (with Romanenko, V. Yu.) Operator conditions for the holomorphy of Lipschitz mappings of domains of a Hilbert space. (Russian) 91a:58022
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- Apitzsch, W. (with Fritzsche, Bernd; Kirstein, Bernd) A Schur analysis approach to maximum distance problems in Hilbert space and prediction. **91k:47173**  
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- Abou-Zied, Mostafa Mohamed Theory of many particle scattering of multi-channel systems. I. The wave operators and the resolvent. (Arabic summary) (Not in MR)

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 Bèlissard, Jean (with Bovier, Anton; Ghez, Jean-Michel) Spectral properties of a tight binding Hamiltonian with period doubling potential. **91m:81042**  
 Belyi, A. G. (with Semenov, Yu. A.) On the  $L^p$ -theory of Schrödinger semigroups. II. **91j:35086**  
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 — (with Yngvason, Jakob) Local nets and selfadjoint extensions of quantum field operators. **91m:81130**  
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- Sontag, Eduardo D. ★ Mathematical control theory. 91m:93001

##### 49-02 Research exposition (monographs, survey articles)

- Andrievskii, B. R. (with Stotskii, A. A.; Fradkov, A. L.) Velocity gradient algorithms in problems of control and adaptation. 91c:49001
- Aubin, Jean-Pierre (with Frankowska, Halina) ★ Set-valued analysis. 91d:49001
- Barbu, Viorel ★ Metode matematice in optimizarea sistemelor diferențiale. (Romanian) [Mathematical methods for the optimization of differential systems] 91h:49001
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- Clarke, Frank H. ★ Methods of dynamic and nonsmooth optimization. 91j:49001
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- Bulatov, V. P. see Antsiferov, E. G.; et al., 91f:90001
- (Burov, M. B.) see Butkovskii, A. G., 91f:93001
- Butkovskii, A. G. (with Samoilenko, Yu. I.) ★ Control of quantum-mechanical processes and systems. 91f:93001
- Chrastina, Jan ★ Formal calculus of variations on fibered manifolds. 91f:58024
- (Gamkrelidze, R. V.) see Analysis, 91e:00001
- Grimbe, Michael J. (with Johnson, Michael A.) ★ Optimal control and stochastic estimation: theory and applications. Vol. 1. 91e:93001a
- (with Johnson, Michael A.) ★ Optimal control and stochastic estimation: theory and applications. Vol. 2. 91e:93001b
- Johnson, Michael A. see Grimbé, Michael J., 91e:93001a and 91e:93001b
- Marro, Giovanni ★ Teoria dei sistemi e del controllo. (Italian) [Systems and control theory] 91k:93002
- (Newton, Dan) see Analysis, 91e:00001
- Samoilenko, Yu. I. see Butkovskii, A. G., 91f:93001
- Srochko, V. A. see Vasil'ev, O. V.; et al., 91f:90002
- Terletskii, V. A. see Vasil'ev, O. V.; et al., 91f:90002
- Tikhomirov, V. M. Some problems arising in connection with the theory of optimization. 91f:90143
- Vasil'ev, O. V. (with Srochko, V. A.; Terletskii, V. A.) ★ Методы оптимизации и их приложения. Часть 2. (Russian) [Optimization methods and their applications. Part 2] 91f:90002
- Williams, Byron K. Review of dynamic optimization methods in renewable natural resource management. 91b:90063

Items listed otherwise than by author

- Analysis ★ Analysis. II. 91e:00001
- Encyclopedia of Mathematical Sciences ★ Analysis. II. 91e:00001

#### 49-03 Historical (must also be assigned at least one classification number from Section 01)

(Chervenkova, K.) *see* McShane, Edward James, (Not in MR)  
 McShane, Edward James The calculus of variations from the beginning through optimal control theory. (Bulgarian) (Not in MR)

Items with secondary classifications in 49-03

Dorofeeva, A. V. The implicit function theorem and its connection with the theory of extremal problems. (Russian. English summary) 91h:01039  
 (Euler, Leonhard) *see* Rumyantsev, V. V., (91e:01026)  
 Klötzler, Rolf Optimality and Mathematics. [Optimality and mathematics] (see 91h:00032)  
 Rumyantsev, V. V. Leonhard Euler and the variational principles of mechanics. (Russian) (see 91e:01026)  
 Sussmann, Héctor J. Thirty years of optimal control. Was the path unique? 91e:01018  
 Warga, Jack Some selected problems of optimal control. 91k:01012

#### 49-06 Proceedings, conferences, collections, etc.

(Cellina, Arrigo) *see* Methods of nonconvex analysis, 91h:49002  
 (Kim, A. V.) *see* Some control and stability problems, 91e:49003  
 (Maksimov, V. I.) *see* Some control and stability problems, 91e:49003

Items listed otherwise than by author

Lecture Notes in Mathematics ★ Methods of nonconvex analysis. 91h:49002  
 Methods of nonconvex analysis ★ Methods of nonconvex analysis. 91h:49002  
 Optimal control and differential games ★ Optimal control and differential games. (Not in MR)

Session:

Methods of Nonconvex Analysis ★ Methods of nonconvex analysis. 91h:49002  
 Some control and stability problems ★ Некоторые задачи управления и устойчивости. (Russian) [Some control and stability problems] 91e:49003  
 Varena ★ Methods of nonconvex analysis. 91h:49002

Items with secondary classifications in 49-06

(Concus, Paul) *see* Geometric analysis and computer graphics, 91g:00045  
 (Elaydi, Saber) *see* Differential equations, 91m:00031  
 (Finn, Robert) *see* Geometric analysis and computer graphics, 91g:00045  
 (Hoffman, David A.) *see* Geometric analysis and computer graphics, 91g:00045  
 (Pavlovskii, Yu. N.) *see* Decomposition and optimization of complex systems, 91k:90006

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Berkeley, CA ★ Geometric analysis and computer graphics. 91g:00045  
 Colorado Springs, CO ★ Differential equations. 91m:00031

Conference:

Differential Equations: Theory and Applications in Stability and Control ★ Differential equations. 91m:00031

Decomposition and optimization of complex systems ★ Декомпозиция и оптимизация в сложных системах. (Russian) [Decomposition and optimization of complex systems] 91k:90006

Differential equations ★ Differential equations. 91m:00031

Geometric analysis and computer graphics ★ Geometric analysis and computer graphics. 91g:00045

Workshop:

Differential Geometry, Calculus of Variations, and Computer Graphics ★ Geometric analysis and computer graphics. 91g:00045

#### 49Axx Existence theory for optimal solutions (1985)

##### 49A05 Free problems in one independent variable (1985)

Caligaris, O. (with Oliva, P.) Existence theorems for state dependent nonconvex problems. (Italian summary) (Not in MR)  
 Oliva, P. *see* Caligaris, O., (Not in MR)

##### 49A10 Problems involving ordinary differential equations, optimal control (1985)

Hing Cortón, Rosina Criterion for the nonexistence of solutions in a maximal deviation problem for linear systems of order  $n$ . (Spanish. English summary) (Not in MR)

##### 49A50 Topology of solutions, weak and strong minima, semicontinuity, convexity, orientor fields (1985)

Laurence, Peter (with Stredulinsky, Edward) Sur la convergence d'une suite de problèmes variationnels à  $n$  frontières libres associés au problème variationnel de Grad. (English summary) [On the convergence of a sequence of variational problems with  $n$  free boundaries associated with the variational problem of Grad] (Not in MR)  
 Stredulinsky, Edward *see* Laurence, Peter, (Not in MR)  
 Tanaka, Yoshihiro Note on generalized convex functions. (Not in MR)

##### 49A55 Duality theory (1985)

Capitani, Gloria *see* Tibaldi, Marco, (Not in MR)  
 Tibaldi, Marco (with Capitani, Gloria) Duality between frequency-shaped  $LQ$  regulation and coloured noise estimation. (Not in MR)

#### 49Bxx Necessary conditions and sufficient conditions for optimality (1985)

##### 49B05 Free problems in one independent variable (1985)

Yakovenko, S. Yu. Necessary conditions for optimality in the convex Bolza problem with phase constraints of general type. (Not in MR)

##### 49B10 Problems involving ordinary differential equations, optimal control (1985)

Avalishvili, N. M. *see* Gabisoniya, V. E., (Not in MR)  
 Gabisoniya, V. E. (with Avalishvili, N. M.) A problem of controlling an ordered number of operations. (Russian. English and Georgian summaries) (Not in MR)  
 Spivak, A. K. On the optimal control of a nonlinear system. (Russian. Tajiki summary) (Not in MR)

##### 49B22 Problems involving partial differential equations, optimal control (1985)

Bergounioux, Maitine Problèmes de contrôle avec contraintes sur l'état. (English summary) [Control problems with state constraints] (Not in MR)

##### 49B27 Problems in abstract spaces (1985)

Roy, D. Some new theorems on the minimization of functionals on reflexive Banach space. (Not in MR)

##### 49B34 Problems involving functional relations other than differential equations (1985)

Items with secondary classifications in 49B34

Groh, Jürgen Optimierung linearer stetig-diskreter dynamischer Systeme. [Optimization of linear continuous-discrete dynamical systems] (see 91b:00039)  
 Mas'kin, N. M. An integral optimality condition for processes defined by integral equations. (Russian) (see 91b:00036)

##### 49B36 Optimal solutions belonging to restricted classes (1985)

Items with secondary classifications in 49B36

Kabamba, Pierre T. *see* Singh, Gurkiral; et al., (Not in MR)  
 McClamroch, N. Harris *see* Singh, Gurkiral; et al., (Not in MR)  
 Singh, Gurkiral (with Kabamba, Pierre T.; McClamroch, N. Harris) Bang-bang control of flexible spacecraft slewing maneuvers: guaranteed terminal pointing accuracy. (Not in MR)  
 Zabor, N. E. Relay control based on Pontryagin's maximum principle and on a forecasting-model control algorithm. (Not in MR)

##### 49B40 Minimax problems (1985)

Melikyan, A. A. Minimax control problem in the case of incomplete information about target point position. (Not in MR)  
 Tarakanov, A. F. The maximum principle for certain minimax control problems on connected sets. (Not in MR)

##### 49B50 Sensitivity of optimal solutions in the presence of perturbations (1985)

Karkas, D. A. *see* Paraskvopoulos, P. N.; et al., (Not in MR)  
 Paraskvopoulos, P. N. (with Sklavounos, P. G.; Karkas, D. A.) A new orthogonal series approach to sensitivity analysis. (Not in MR)  
 Sklavounos, P. G. *see* Paraskvopoulos, P. N.; et al., (Not in MR)

Items with secondary classifications in 49B50

Bai, Er Wei (with Dasgupta, Soura) Robust control design of sampled systems. (Not in MR)  
 Dasgupta, Soura *see* Bai, Er Wei, (Not in MR)  
 Doraiswami, R. Time-domain approach to quantification of overshoot, speed and robustness. (Not in MR)  
 Horowitz, Isaac M. *see* Kelemen, Matel; et al., (Not in MR)  
 Kannai, Yakar *see* Kelemen, Matel; et al., (Not in MR)  
 Kelemen, Matel (with Kannai, Yakar; Horowitz, Isaac M.) Arbitrarily low sensitivity (ALS) in linear distributed systems using pointwise linear feedback. (Not in MR)  
 Okada, Kenji (with Skelton, Robert E.) Sensitivity controller for uncertain systems. (Not in MR)  
 Skelton, Robert E. *see* Okada, Kenji, (Not in MR)

##### 49B60 Optimal stochastic control [see also 93Exx] (1985)

Hu, Ying The maximum principle in optimal control of Markov processes. (Chinese) (Not in MR)  
 Kan, Yu. S. (with Kibzun, A. I.) Optimal control of a linear system according to a quantile criterion. (Not in MR)  
 Kibzun, A. I. *see* Kan, Yu. S., (Not in MR)

# 49Cxx Carathéodory, Hamilton-Jacobi theories, including dynamic programming (1985)[see also 90C39]

## 49C10 Free problems and problems involving partial differential equations (1985)

Spivak, A. K. Approximate synthesis of the optimal control of systems with small perturbations. (Russian. Tajiki summary) (Not in MR)

## 49C20 Dynamic programming method (1985)

Laos, Rein. Optimal control by dynamic programming using systematic reduction in grid size. (Not in MR)

— Application of dynamic programming to high-dimensional nonlinear optimal control problems. (Not in MR)

Items with secondary classifications in 49C20

Liu, Bao Kun (with Pang, Tong Hui). Optimal control with preview actions. (Chinese. English summary) (Not in MR)

Pang, Tong Hui. *see* Liu, Bao Kun, (Not in MR)

# 49Dxx Methods of successive approximations (1985){For discrete problems, see 90Cxx; see also 65Kxx.}

## 49D07 Gradient methods (1985)

Items with secondary classifications in 49D07

Dreyfus, Stuart E. Artificial neural networks, back propagation, and the Kelley-Bryson gradient procedure. (Not in MR)

Johns, David A. (with Snelgrove, W. Martin; Sedra, Adel S.) Adaptive recursive state-space filters using a gradient-based algorithm. (Not in MR)

Sedra, Adel S. *see* Johns, David A.; et al., (Not in MR)

Snelgrove, W. Martin. *see* Johns, David A.; et al., (Not in MR)

## 49D15 Methods of Newton-Raphson, Galerkin and Ritz types (1985)

Gusar, V. V. (with Ligan, A. A.) Solving optimal control problems by means of splines. (Russian) (see 91a:41002)

Kalashnikov, A. L. (with Pyuro, N. D.) Strengthened regularization in A. N. Tikhonov's method with integral constraints on the control and the trajectory. (Russian) (see 91b:34004)

Ligan, A. A. *see* Gusar, V. V., (91a:41002)

Pyuro, N. D. *see* Kalashnikov, A. L., (91b:34004)

Serovskii, S. Ya. Fourier series and regularization of weakly well-posed extremal problems. (see 91b:00026)

Veronin, A. N. Approximate solution of multicriterial variational control problems. (Not in MR)

## 49D25 Finite difference methods (1985)

Barahona Droggett, Manuel F. An optimal control problem: Euler suboptimality. (Spanish. English summary) (Not in MR)

## 49D27 Decomposition methods (1985)

Anderson, Brian D. O. *see* Tsai, Mi-Ching; et al., (Not in MR)

Gu, Da-Wei. *see* Tsai, Mi-Ching; et al., (Not in MR)

Hou, Daqing. *see* Hsu, Chin Shui, (Not in MR)

Hsu, Chin Shui (with Hou, Daqing). Decomposition of a multivariable continuous system with pure integrations. (Not in MR)

Kotta, Ülle. Decomposition of nonlinear discrete controlled systems. (Not in MR)

Postlethwaite, Ian. *see* Tsai, Mi-Ching; et al., (Not in MR)

Tsai, Mi-Ching (with Gu, Da-Wei; Postlethwaite, Ian; Anderson, Brian D. O.) Inner functions and a pseudo-singular-value decomposition in super-optimal  $H^\infty$  control. (Not in MR)

Items with secondary classifications in 49D27

Commault, C. (with Dion, Jean Michel; Torres, J. A.) Invariant spaces at infinity of linear systems application to block decoupling. (Not in MR)

Dion, Jean Michel. *see* Commault, C.; et al., (Not in MR)

Torres, J. A. *see* Commault, C.; et al., (Not in MR)

Yang, Wei Lin (with Zhang, Si Ying). A kind of nonlinear system and its reduction and structural control. (see 91f:93002)

Zhang, Si Ying. *see* Yang, Wei Lin, (91f:93002)

## 49D29 Multiplier methods (1985)

Items with secondary classifications in 49D29

Bergounioux, Maitine. Problèmes de contrôle avec contraintes sur l'état. (English summary) [Control problems with state constraints] (Not in MR)

Bryson, Arthur E., Jr. *see* Walker, Robert A., (Not in MR)

Ushkova, T. E. Optimal estimation of navigational information on the basis of linear models. (Russian) (see 91e:00013)

Walker, Robert A. (with Bryson, Arthur E., Jr.) Reliable algorithm for modal decomposition. (Not in MR)

## 49D40 Methods of quadratic programming type (1985)

Anderson, Brian D. O. *see* Liu, Yi<sup>1</sup>, (Not in MR)

Kudin, V. F. (with Lyashevskii, S. E.) Equivalence conditions for dynamical regimes of linear systems in the analytical design of controllers. (Russian) (Not in MR)

Liu, Shu Zhen. *see* Wang, Zi Cai; et al., (Not in MR)

Liu, Yi<sup>1</sup> (with Anderson, Brian D. O.) Frequency weighted controller reduction methods and loop transfer recovery. (Not in MR)

Lü, Yong Zai. *see* Wang, Yao Qing, (Not in MR)

Lyashevskii, S. E. *see* Kudin, V. F., (Not in MR)

Ni, Mao Lin. *see* Wang, Zi Cai; et al., (Not in MR)

Pristavko, V. T. (with Sheregov, S. V.) Bilinear matrix quadratic control systems. (Russian. English summary) (Not in MR)

Razzaghi, Mohsen. Optimal control of linear time-varying systems via Fourier series. (Not in MR)

Sheregov, S. V. *see* Pristavko, V. T., (Not in MR)

Wang, Jian Ju. Optimal control with a positive cone constraint and a quadratic cost functional. (Chinese. English summary) (Not in MR)

Wang, Yao Qing (with Lü, Yong Zai). Two theorems concerning the determination of weighted matrices. (Chinese. English summary) (Not in MR)

Wang, Zi Cai (with Ni, Mao Lin; Liu, Shu Zhen). Design of a control system with integrity and excellent dynamical characteristics. (Chinese. English summary) (Not in MR)

Wilson, David A. Extended optimality properties of the linear quadratic regulator and stationary Kalman filter. (Not in MR)

Items with secondary classifications in 49D40

Graf, Peter L. (with Shoureshi, Rahmat). Gain-sensitivity augmentation for near-optimal control of linear parameter-dependent plants. (Not in MR)

Keis, I. A. Synthesis of a control, suboptimal with respect to a volume criterion, of a multidimensional system by the linear aggregation method. (Russian. English and Estonian summaries) (Not in MR)

Liu, Bao Kun (with Pang, Tong Hui). Optimal control with preview actions. (Chinese. English summary) (Not in MR)

Pang, Tong Hui. *see* Liu, Bao Kun, (Not in MR)

Shoureshi, Rahmat. *see* Graf, Peter L., (Not in MR)

## 49D50 Periodic optimization (1985)

Perov, A. I. (with Tananika, A. A.) On a geometric result in problems of periodic optimization. (Russian) (Not in MR)

Safonkin, V. I. Periodic regimes in control systems in the presence of sliding. (Russian) (see 91b:00036)

Tananika, A. A. *see* Perov, A. I., (Not in MR)

Items with secondary classifications in 49D50

Rozenvasser, E. N. Application of parametric transfer functions for the analysis of sampled-data systems in continuous time. II. Analysis of processes under random perturbations. (Not in MR)

# 49Exx Controllability and geometry of control problems (1985)

## 49E05 General dependence on controls (1985)

Mironov, A. V. *see* Slugin, S. N., (91b:34004)

Slugin, S. N. (with Mironov, A. V.) Stability with respect to control of an integral system with a variable domain. (Russian) (see 91b:34004)

## 49E15 Attainable sets, controllability (1985)

Komornik, Vilmos. On the exact controllability of a Petrowsky system. (see 91b:00051)

Nikitenko, O. V. (with Semenov, V. N.) The geometric structure of the phase space of a dynamic system with constraints at a nonsingular point. (Not in MR)

Semenov, V. N. *see* Nikitenko, O. V., (Not in MR)

Voskresenskii, E. V. On the controllability of nonlinear systems. (Russian) (see 91e:00013)

Items with secondary classifications in 49E15

Knelier, D. V. (with Kubyshkin, V. A.) Construction of phase portraits of dynamical systems that are nonlinear with respect to control. (Russian) (Not in MR)

Kubyshkin, V. A. *see* Knelier, D. V., (Not in MR)

Lange, Othfried. Steuerbarkeit für stationäre Zustände bei speziellen dynamischen Systemen. (English and Russian summaries) [Controllability for stationary states in special dynamic systems] (Not in MR)

Pommaret, J.-F. Group theory and controllability of partial differential control systems. (see 91f:93002)

## 49E20 Interrelations between stability problems and optimization problems (1985)

Items with secondary classifications in 49E20

Bisacco, Mauro (with Fornasini, Ettore). Optimal control of two-dimensional systems. (Not in MR)

Fornasini, Ettore. *see* Bisacco, Mauro, (Not in MR)



## 49Gxx Variational methods for eigenvalues (1985)[see also 47A70]

### 49G10 Rayleigh-Ritz methods (1985)

Gasanov, M. G. Variational principles for nonsmooth Rayleigh systems and their approximation. (Not in MR)

## 49Jxx Existence theory for optimal solutions

### 49J05 Free problems in one independent variable

Cellina, Arrigo (with Colombo, Giovanni) On a classical problem of the calculus of variations without convexity assumptions. (French summary) 91c:49003  
Colombo, Giovanni see Cellina, Arrigo, 91c:49003  
Hlawka, Edmund Über die direkten Methoden der Variationsrechnung und Gleichverteilung. [On direct methods of variational calculus and uniform distribution] 91d:49002

Items with secondary classifications in 49J05

Botteron, Bernard (with Dacorogna, Bernard) Existence and nonexistence results for noncoercive variational problems and applications in ecology. 91c:92081  
Dacorogna, Bernard see Botteron, Bernard, 91c:92081

### 49J10 Free problems in two or more independent variables

Ambrosio, Luigi Variational problems in SBV and image segmentation. 91d:49003  
Aubert, Gilles (with Tahraoui, Rabah) Sur une classe de problèmes différentiels non linéaires par une méthode variationnelle. (Italian summary) [Study of a class of nonlinear differential problems by a variational method] 91b:49001  
Bethuel, Fabrice (with Brézis, Haim) Minimisation de  $f(|\nabla(u - (x/|x|))|^2)$  et divers phénomènes de gap. (English summary) [Minimization of  $f(|\nabla(u - (x/|x|))|^2)$  and various gap phenomena] 91f:49001  
Brézis, Haim see Bethuel, Fabrice, 91f:49001  
Carriero, Michele (with Leaci, Antonio) Existence theorem for a Dirichlet problem with free discontinuity set. 91k:49002  
Leaci, Antonio see Carriero, Michele, 91k:49002  
Marcellini, Paolo Nonconvex integrals of the calculus of variations. 91j:49002  
Monteiro Marques, Manuel D. P. Minimization of integral functionals depending on Lipschitz domains. 91d:49004  
Tahraoui, Rabah see Aubert, Gilles, 91b:49001

Items with secondary classifications in 49J10

Ambrosio, Luigi Existence of minimal energy configurations of nematic liquid crystals with variable degree of orientation. 91h:58025  
Anzellotti, G. (with Serapioni, R.; Tamanini, Italo) Curvatures, functionals, currents. 91k:49059  
Caffarelli, Luis A. A Harnack inequality approach to the regularity of free boundaries. III. Existence theory, compactness, and dependence on  $X$ . 91a:35170  
Esteban, Maria J. Nonsymmetric ground states of symmetric variational problems. 91m:35073  
Mascolo, Elvira Local minima of nonconvex problems. 91e:49017  
Owen, Nicholas C. (with Rubinstein, Jacob; Sternberg, Peter) Minimizers and gradient flows for singularly perturbed bi-stable potentials with a Dirichlet condition. 91j:49052  
Rubinstein, Jacob see Owen, Nicholas C.; et al., 91j:49052  
Serapioni, R. see Anzellotti, G.; et al., 91k:49059  
Sternberg, Peter see Owen, Nicholas C.; et al., 91j:49052  
Tamanini, Italo see Anzellotti, G.; et al., 91k:49059  
Vladimirov, Yu. N. Problems of the optimal displacement of a mass on a plane and Lipschitz functions connected with them. (Russian) 91j:90052

### 49J15 Optimal control problems involving ordinary differential equations

Brokate, Martin ★ Optimal Steuerung von gewöhnlichen Differentialgleichungen mit Nichtlinearitäten vom Hysteresis-Typ. (German) [Optimal control of ordinary differential equations with nonlinearities of hysteresis type] 91c:49004  
Darken, Joanne Accessible sets for analytic control systems in  $\mathbb{R}^2$ . 91b:49002  
Erovenko, I. D. Optimization of a dynamical system with multidimensional control. (Russian) 91b:49003  
Karagevov, Z. A. see Yussifov, B. M., 91k:49003  
Kogan, Jacob Structure of minimizers in linear-quadratic Bolza problems of optimal control. 91b:49004  
Kupka, Ivan A. K. Fuller's phenomena. 91f:49002  
Yussifov, B. M. (with Karagevov, Z. A.) On the problem of the existence of optimal controls. 91k:49003

Items with secondary classifications in 49J15

Adiatulina, R. A. (with Taras'ev, A. M.) Cost functions in a differential game with infinite horizon. (Russian) 91i:90095  
Brown, Robert Freeman (with Zezza, Pier Luigi) Multiple local solutions to nonlinear control processes. 91j:93008  
Butenina, N. N. (with Pavlyuchonok, Z. G.) Separatrix loops and bifurcations of domains of controllability. (Russian) 91m:93014  
Buttazzo, Giuseppe ★ Semicontinuity, relaxation and integral representation in the calculus of variations. 91c:49002  
Fazylov, A. Z. A linear problem of avoiding collisions. (Russian) 91a:90208

Fedorov, A. Yu. Development of accessibility areas and nonlinear dynamic systems controllability. 91j:93004  
Fisher, Michael Ernest (with Noakes, J. Lyle; Teo, Kok Lay) A minimum trapping time problem in optimal control theory. 91j:49030  
Ishmukhametov, A. Z. see Vasil'ev, F. P.; et al., 91k:49050  
Jachimović, M. D. see Vasil'ev, F. P.; et al., 91k:49050  
Kupka, Ivan A. K. The ubiquity of Fuller's phenomenon. 91j:58049  
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Pokotilo, V. G. ★ Новая метод квазиоптимальной аппроксимации пересечения эллипсоидов. (Russian) [A new method for quasi-optimal approximation of the intersection of ellipsoids] 91m:93015  
— (with Lerman, S. F.) Asymptotic properties of ellipsoids that approximate information sets. (Russian) 91k:93012  
Potapov, M. M. see Vasil'ev, F. P.; et al., 91k:49050  
Taras'ev, A. M. see Adiatulina, R. A., 91i:90095  
Teo, Kok Lay see Fisher, Michael Ernest; et al., 91j:49030  
Vasil'ev, F. P. (with Ishmukhametov, A. Z.; Potapov, M. M.; Jachimović, M. D.) The generalized moment problem in an optimal control problem with an integral quadratic functional. (Russian) 91k:49050  
Zaremba, Leszek Saturnin Differential games reducible to optimal control problems. 91a:90207  
Zezza, Pier Luigi see Brown, Robert Freeman, 91j:93008

### 49J20 Optimal control problems involving partial differential equations

Ambrosio, Luigi Existence theory for a new class of variational problems. 91g:49002  
Bilić, Nataša The optimal control problem governed by Stokes equations with control variable in boundary conditions. (Serbo-Croatian summary) (see 91m:00027)  
Borisov, V. F. see Zelikin, M. I., 91f:49004  
Bruch, J. C., Jr. see Sadigh-Esfandari, R.; et al., 91e:49006  
Buttazzo, Giuseppe (with Dal Maso, Gianni) Shape optimization for Dirichlet problems: relaxed solutions and optimality conditions. 91c:49005  
Dal Maso, Gianni see Buttazzo, Giuseppe, 91c:49005  
Emanuilov, O. Yu. Existence theorems for a solution of problems of controlling singular distributed systems. 91k:49004  
Gasanov, K. K. Existence theorems for optimal control in processes that can be described by a system of quasilinear hyperbolic equations. (Russian. English and Azerbaijani summaries) 91e:49004  
Gautesen, A. K. (with Olmstead, W. E.) Small penalty control of the end temperature in a long rod. 91k:49005  
Haslinger, Jaroslav (with Horák, Václav) On identification of critical curves. (Russian and Czech summaries) 91d:49005  
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Khludnev, A. M. Optimal control of a plate over an obstacle. 91e:49005  
Kirillov, P. V. see Vaf'pe, I. M., 91h:49003  
Olmstead, W. E. see Gautesen, A. K., 91k:49005  
Papageorgiou, Nikolaos S. Existence of optimal controls for nonlinear distributed parameter systems. 91c:49006  
— Relaxability and well-posedness for infinite-dimensional optimal control problems. 91j:49003  
Rutkovskii, N. V. Optimal transport in space. (Russian) 91e:49007  
Sadigh-Esfandari, R. (with Sloss, J. M.; Bruch, J. C., Jr.) Maximum principle for optimal control of distributed-parameter systems with singular mass matrix. 91e:49006  
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— Optimal damping control and nonlinear elliptic systems. 91m:49001  
Tscherv, Trvetomir An optimal control problem for the heat equation. 91e:49007  
— An  $l_2$  constrained best approximation problem. 91a:49002  
Vaf'pe, I. M. (with Kirillov, P. V.) Control of the finite state of a process that can be described by a linear partial differential system. (Russian) 91h:49003  
Zelikin, M. I. (with Borisov, V. F.) Synthesis in problems of optimal control containing a trajectory with switchings whose frequency increases, and second-order singular trajectories. 91f:49004  
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Brokate, Martin (with Sprekels, Jürgen) Existence and optimal control of mechanical processes with hysteresis in viscous solids. 91c:35099  
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- Messierle, E. S. On the existence of an optimal control of a system of diffusion equations in a three-component gas mixture. (Russian) (see 91k:00020)
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- Carlson, Dean A. Infinite-horizon optimal controls for problems governed by a Volterra integral equation with state-and-control-dependent discount factor. 91d:49006

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- Karagezov, Z. A. *see* Yusifov, B. M., 91k:49003
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- A survey of viability theory. 91f:49005
- Ben-Israel, Adi *see* Flåm, Sjur D., 91h:49006
- Bressan, Alberto Upper and lower semicontinuous differential inclusions: a unified approach. 91c:49008
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- Frankowska, Halina (with Quincampoix, Marc) Un algorithme déterminant les noyaux de viabilité pour des inclusions différentielles avec contraintes. (English summary) [An algorithm for the viability kernels of differential inclusions with constraints] 91m:34015
- Frigon, Marilène (with Granas, Andrzej) Théorèmes d'existence pour des inclusions différentielles sans convexité. (English summary) [Existence theorems for differential inclusions without convexity] 91c:34014
- Fryszkowski, Andrzej Continuous selections of Aumann integrals. 91i:54017
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- Kandlakis, Dimitrios (with Papageorgiou, Nikolaos S.) Correction on: "On the properties of the Aumann integral with applications to differential inclusions and control systems" [Czechoslovak Math. J. 39(114) (1989), no. 1, 1-15; MR 90b:28013]. 91m:28015
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- Kondrat'ev, D. L. (with Lotov, A. V.) Exterior estimates and construction of attainable sets for nonlinear control systems. (Russian) 91d:93004
- Křivan, Vlastimil What is viability theory? (Czech) (Not in MR)
- Lotov, A. V. *see* Kondrat'ev, D. L., 91d:93004
- Makhmudov, E. N. Some extremal problems for discrete and differential inclusions with distributed parameters of elliptic type, and duality. 91j:65183
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- Medhin, N. G. Minimizing sequences for differential inclusion problems in the presence of state constraints. 91f:34016
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- Ornelas, António A continuous version of the Filippov-Gronwall inequality for differential inclusions. (Italian summary) 91m:34018
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### 49J25 Optimal control problems involving equations with retarded arguments [see also 34K35]

- Carlson, Dean A. The existence of catching-up optimal solutions for a class of infinite horizon optimal control problems with time delay. **91h:49008**  
 Kisielewicz, Michał Some problems in optimal control theory of systems described by neutral-functional-differential equations. **91e:49012**  
 Mete'skii, A. V. Dual problems of attainability and observability for linear time-independent systems with delay. (Russian) **91h:49008**  
 Musselli, Elena On the existence of solutions for control problems with delay. (Italian. English summary) **91h:49009**  
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- Ball, J. M. Sets of gradients with no rank-one connections. (French summary) **91k:49008**  
 Bogdan, Victor M. Nonanticipating operator-differential equations in the class of Bochner measurable functions and existence of optimal controls. **91d:49008**  
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 Ekeland, Ivar The  $\epsilon$ -variational principle revisited. **91k:49009**  
 Fleming, Wendell H. Generalized solutions and convex duality in optimal control. **91a:49003**  
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 Golicher, I. I. (with Lukmanov, R. L.) A method for the expansion of a function of an operator in some problems of optimal control. **91e:49014**  
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 Mamytov, Dz. Optimal stabilization of a nonlinear system in a Banach space. (Russian) **91c:49010**  
 Papageorgiou, Apostolos (with Papageorgiou, Nikolaos S.) Necessary and sufficient conditions for optimality in nonlinear distributed parameter systems with variable initial state. **91e:49015**  
 Papageorgiou, Nikolaos S. Relaxation and existence of optimal controls for systems governed by evolution inclusions in separable Banach spaces. **91c:49011**  
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 Park, Sehie (with Kim, Sung Ki) On generalized extremal principles. **91e:49016**  
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 Gerth, Christiane (with Weidner, Petra) Nonconvex separation theorems and some applications in vector optimization. **91k:90152**  
 Ghossein, N. A general mountain pass principle for locating and classifying critical points. (French summary) **91a:58043**  
 Kaplan, A. A. Convergence of methods for solving variational inequalities with weakly coercive operators. **91b:49012**  
 Maksimov, V. I. Existence of solutions and modeling of controls in some systems with distributed parameters. (Russian) **91f:34104**  
 Mel'nik, V. S.  $\epsilon$ -extremal solutions of noncoercive operator equations. (Russian) **91e:49055**  
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 Shi, Shu Zhong Erratum: "Optimal control of strongly monotone variational inequalities" [SIAM J. Control Optim. 26 (1988), no. 2, 274–290; MR 89d:49009]. **91a:49007**  
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 Tsachev, Tsvetomir An  $l_2$  constrained best approximation problem. **91a:49002**  
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### 49J30 Optimal solutions belonging to restricted classes (Lipschitz controls, bang-bang controls, etc.)

- Sumin, V. I. A foundation for gradient methods for distributed optimal control problems. **91c:49012**

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- Danielyan, E. A. (with Popov, G. A.) Minimization of a nonlinear functional under moment restrictions. (Russian. Armenian summary) **91h:60025**  
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 Donchev, A. L. Duality in the constrained best interpolation. **91e:41023**  
 Hyslop, Gregory L. (with Schättler, Heinz; Tarn, Tzyh Jong) Optimal periodic output feedback control for linear time-invariant systems. **91a:49024**  
 Mascolo, Elvira Local minima of nonconvex problems. **91e:49017**  
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### 49J35 Minimax problems

- Abasov, T. M. ★ Модифицированные функции Лагранжа в задачах отыскания седловых точек. (Russian) [Modified Lagrange functions in problems of determining saddle points] **91j:49006**  
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 Fu, Yi Hui (with Li, Mi An) Optimality conditions for a class of generalized max-min problems in the space  $\mathbb{R}^n$ . (Chinese. English summary) **91e:49005**  
 Gígola, Cristina (with Gómez, Susana) A regularization method for solving the finite convex min-max problem. **91j:49007**  
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 Gorelik, V. A. (with Tarakanov, A. F.) Minimization of nonsmooth functionals of maximum type in control problems with phase constraints. (Russian) **91m:49003**  
 Horvath, Charles Quelques théorèmes en théorie des mini-max. (English summary) [Some results in minimax theory] **91f:49008**  
 Kindler, Jürgen (with Trost, Ralf W.) Minimax theorems for interval spaces. **91f:49009**  
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 Zavriv, M. K. ★ Комбинированный метод штрафов и стохастических квазиградиентов для поиска связанного максимина. (Russian) [A combined penalty and stochastic quasigradient method for the search for a connected maximin] **91m:49005**  
 Zinchuk, N. A. Conversion of minimax parameter estimation problems to a system of algebraic equations. **91j:49010**

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- Anan'ev, B. I. (with Baisakalov, I. B.) A minimax optimal control problem for statistically uncertain systems. (Russian) **91k:93091**  
 Anisovich, V. V. Design of an optimal control in a nonlinear minimax problem. **91i:93048**  
 Appell, William D. L. Min and max functions, Bochner-Radon-Nikodym approximations, and a representation characterization. **91d:28026**  
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 Barabanov, A. E. (with Ivanova, A. V.) Minimax control of a nonminimal-phase object under combined perturbations. **91m:93140**  
 Baston, V. J. (with Bostock, F. A.) An evasion game on a finite tree. **91d:90108**  
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 Davydov, E. G. Solution of some classes of multiple minimax problems. (Russian) **91g:90144**  
 Dem'yanov, V. F. (with Malozëmov, V. N.) ★ Introduction to minimax. **91k:49001**  
 Ding, Xie Ping (with Tan, Kok-Keong) Matching theorems, fixed point theorems and minimax inequalities without convexity. **91f:47082**  
 Gorelik, V. A. (with Tarakanov, A. F.) The penalty method for nonsmooth minimax control problems with related variables. **91j:49015**  
 Greco, Gabriele H. Minimax theorems and saddling transformations. **91j:90099**  
 Huang, Chih Liang (with Lai, Kuang Chê) Minimax model reference adaptive control for a plant subject to unmodeled dynamics. (Chinese summary) (Not in MR)  
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 Katslev, A. N. (with Perevozchikov, A. G.) Determining the weight functions of nonstationary pulse systems by the minimax criterion. **91k:93055**  
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 Lokshin, M. D. Game control with an integral constraint on noise. **91h:90141**  
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- Martellotti, Anna (with Salvadori, Anna) Inequality systems and minimax results without linear structure. 91c:90122
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- Phillips, Y. A. Optimal estimation and control of discrete multiplicative systems with unknown second-order statistics. 91c:93084
- Pinelis, I. F. On minimax risk. 91f:62019
- Polak, Elijah (with Wiest, E. J.) Variable-metric technique for the solution of affinely parametrized nondifferentiable optimal design problems. 91k:90180
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- Blot, Joël Calculus of variations in mean and convex Lagrangians. III. 91f:58016
- Nowakowski, Andrzej Duality and classical problem of the calculus of variations without convexity assumptions. 91m:49036
- Panchenkov, A. N. Generalized solutions of ill-posed extremal problems. (Russian) 91k:49037
- Zadorozhnyi, V. G. An inverse problem of the calculus of variations for systems of differential equations. (Russian) 91c:49026

#### 49K10 Free problems in two or more independent variables

- Bronshtein, M. D. (with Cherevatskii, A. S.) Variational problems for functionals determined by the maximum of a Lagrangian. (Russian) 91m:49017
- Burtsev, S. V. Once more on a problem of Ulam. (Russian) 91c:49031
- Cherevatskii, A. S. see Bronshtein, M. D. 91m:49017
- Dierkes, Ulrich Über singuläre Lösungen gewisser mehrdimensionaler Variationsprobleme. [On singular solutions of certain multidimensional variational problems] 91j:49028
- Dogaru, Otilia see Udriste, Constantin. (Not in MR)
- Liang, Xi Ting Regularity everywhere of the gradients of solutions to a class of minimum problems for functionals. (Chinese. English summary) 91j:49029
- Loewen, Philip D. Second-order sufficiency criteria and local convexity for equivalent problems in the calculus of variations. 91c:49021
- Ma, Ru Nian see Shen, Yao Tian. 91c:49032
- Shen, Yao Tian (with Ma, Ru Nian) On the global minimum boundedness of energy functional for harmonic mapping. 91c:49032
- Udriste, Constantin (with Dogaru, Otilia) Constrained extrema on orbits. (Romanian. English summary) (Not in MR)

#### Items with secondary classifications in 49K10

- Ambrosio, Luigi (with Braides, Andrea) Functionals defined on partitions in sets of finite perimeter. I. Integral representation and  $\Gamma$ -convergence. 91j:49015
- (with Braides, Andrea) Functionals defined on partitions in sets of finite perimeter. II. Semicontinuity, relaxation and homogenization. 91j:49016
- Blot, Joël Calculus of variations in mean and convex Lagrangians. II. 91b:58033
- Trajectoires presque-périodiques des systèmes lagrangiens convexes. (English summary) [Almost periodic trajectories of convex Lagrangian systems] 91b:58218
- Braides, Andrea see Ambrosio, Luigi. 91j:49015 and 91j:49016
- Chung, Wing Sum Higher order conservation laws and a higher order Noether's theorem. 91b:58049
- Fusco, Nicola (with Sbordone, Carlo) Higher integrability of the gradient of minimizers of functionals with nonstandard growth conditions. 91b:49015
- Kawohl, Bernhard On the simple shape of stable equilibria. 91f:35010
- Liu, Xian Gao Quasiconvexity and partial regularity in variational methods. (Chinese) 91j:49057
- Loewen, Philip D. (with Rockafellar, R. Tyrrell) The adjoint arc in nonsmooth optimization. 91b:49019
- Marino, Antonio (with Saccon, Claudio; Tosques, Mario) Curves of maximal slope and parabolic variational inequalities on nonconvex constraints. 91d:58035
- Minenko, A. S. A nonlinear problem of the potential flow of a fluid. (Russian) 91a:76009
- Montesinos Amilibia, A. (with Segura, Salvador) A Dido problem for domains in  $\mathbb{R}^2$  with a given inradius. 91c:52009
- Rockafellar, R. Tyrrell see Loewen, Philip D. 91b:49019
- Saccon, Claudio see Marino, Antonio; et al. 91d:58035
- Sbordone, Carlo see Fusco, Nicola. 91b:49015
- Segura, Salvador see Montesinos Amilibia, A. 91c:52009
- Senn, Walter Strikte Konvexität für Variationsprobleme auf dem  $n$ -dimensionalen Torus. (English summary) [Strict convexity for variational problems on the  $n$ -dimensional torus] 91k:49057
- Serĭgin, G. A. Differential properties of extremals of variational problems in the mechanics of viscoplastic media. (Russian) 91m:49042
- Tosques, Mario see Marino, Antonio; et al. 91d:58035
- Truc, Françoise Problèmes variationnels non convexes en dualité (équation des coques; systèmes gyroscopiques). [Nonconvex variational problems in duality (the shell equation; gyroscopic systems)] 91d:49041
- Zhang, Ke Wei Polyconvexity and stability of equilibria in nonlinear elasticity. 91d:73020

#### 49K15 Problems involving ordinary differential equations

- Arutyunov, A. V. (with Mardanov, M. Dzh.) On the theory of the maximum principle in problems with delays. (Russian) 91b:49031
- Azamov, A. R. see Azamov, A. A. 91b:49021
- Azamov, A. A. (with Azamov, A. R.) A necessary and sufficient condition for the uniqueness and relay property of extremal controls in linear systems. (Russian. Uzbek summary) 91b:49021
- Barbashina, E. E. A compact formula for the second variation on a packet. (Russian) 91a:49010
- Berdyshev, Yu. I. Necessary conditions for optimality in a problem of successive optimization. (Russian) 91b:49032
- (with Chentsov, A. G.) A problem of sequential optimization under convex constraints. (Russian) 91b:49021
- Berquier, Françoise Points focaux, problème de Bolza et contrôle optimal. (English summary) [Focal points, the Bolza problem and optimal control] 91c:49033
- Canara, Piermarco (with Frankowska, Halina) Quelques caractérisations des trajectoires optimales en théorie de contrôle. (English summary) [Some characterisations of optimal

- trajectories in control theory] 91b:49022
- Carlson, Dean A. Uniformly overtaking and weakly overtaking optimal solutions in infinite-horizon optimal control: when optimal solutions are agreeable. 91c:49034
- Chentsov, A. G. see Berdyshev, Yu. I. 91b:49021
- Clarke, Frank H. (with Vinter, Richard B.) Regularity properties of optimal controls. 91b:49033
- Faibusovich, L. E. Mechanics, control and symplectic geometry. (Russian) 91m:49018
- Fisher, Michael Ernest (with Noakes, J. Lyle; Teo, Kok Lay) A minimum trapping time problem in optimal control theory. 91b:49030
- Frankowska, Halina see Canara, Piermarco. 91b:49022
- Holmăker, Kjell An optimization problem for the differential equation  $y'' - qy = 0$ . 91c:49022
- Optimization problems for the differential equation  $y'' - qy = 0$ . II. 91c:49023
- Ito, Satoichi (with Shimizu, Kiyotaka) Necessary conditions for constrained optimal control problems via mathematical programming. 91m:49019
- Ivanov, P. R. (with Ivanov, N. M.) A group-theoretic method for lowering dimension in nonlinear optimal control problems. (Russian) (Not in MR)
- Ivanov, N. M. see Ivanov, P. R. (Not in MR)
- Janković, Vladimir Linear optimal control problem in plane. (Not in MR)
- Jurdjević, Velimir Linear systems with quadratic costs. 91g:49008
- Kakko, Barbara A maximum principle in relaxed controls. 91b:49034
- Kiforenko, B. N. Invariant relations in the theory of optimal systems. (Russian) 91b:49035
- Kiselev, Yu. N. A scheme for continuation with respect to a parameter in a nonlinear boundary value problem of the maximum principle. (Russian) 91b:49024
- Lamnabhi-Lagarigue, Françoise (with Stefani, Gianna) Singular optimal control problems: on the necessary conditions of optimality. 91c:49024
- Le Ti Zang Optimization of nonlinear dynamical systems with a control structure. (Russian) (Not in MR)
- Mardanov, M. Dzh. see Arutyunov, A. V. 91b:49031
- Mariyama, Yukihiko Second-order necessary conditions for an optimal control problem with state constraints. 91c:49025
- Mel'nikan, A. A. A positional method for the analysis of singular motions in extremal problems in dynamics. 91d:49022
- Mordukhovich, Boris S. Maximum principle for nonconvex finite difference control systems. 91b:49023
- Morozov, S. F. (with Sumin, M. I.) Optimal control of sliding modes of discontinuous dynamical systems. 91b:49025
- Nistri, P. (with Zecca, Pietro) An optimal control problem in  $L^\infty$ . 91b:49036
- Noakes, J. Lyle see Fisher, Michael Ernest; et al. 91j:49030
- Nowakowski, Andrzej Characterizations of an approximate minimum in optimal control. 91j:49031
- Osmolovskii, N. P. Investigation of extremals in a generalized isoperimetric problem by means of higher-order conditions. (Russian. English and German summaries) 91b:49024
- Panteleev, A. V. Optimal control of continuous-time deterministic systems with incomplete discrete feedback. 91c:49026
- Quijada, O. An approximate maximum principle for suboptimal control problems. 91j:49032
- Shimizu, Kiyotaka see Ito, Satoichi. 91m:49019
- Sobolevskii, E. P. Systems of differential and algebraic inequalities connected with a control problem. (Russian) (Not in MR)
- Stefani, Gianna see Lamnabhi-Lagarigue, Françoise. 91c:49024
- Sumin, M. I. On the residual function of the maximum principle in optimal control theory. (Russian) 91b:49022
- see also Morozov, S. F. 91b:49025
- Teo, Kok Lay see Fisher, Michael Ernest; et al. 91j:49030
- Vashkov, I. O. Time optimality problems at infinity. 91c:49027
- Vinter, Richard B. see Clarke, Frank H. 91b:49033
- Zecca, Pietro see Nistri, P. 91b:49036
- Zhumator, S. S. The choice of optimal trajectories on given manifolds. (Russian. Kazakh summary) 91b:49026

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- Arutyunov, A. V. Perturbations of extremal problems with constraints, and necessary conditions for optimality. (Russian) 91a:49016
- Bacopoulos, A. see Chrysosverghi, I. 91m:49031
- Blyarov, T. N. Stability and optimality of nonlinear systems on a finite time interval. (Russian) 91m:34063
- Chrysosverghi, I. (with Bacopoulos, A.) Discrete approximation of relaxed optimal control problems. 91m:49031
- Dendrinos, Dimitrios S. Nonlinear spatial dynamics, equilibrium states, and static optimization theory. 91c:92112
- Gilbert, E. G. see Vinh, N. X.; et al. 91b:70025
- Gorelik, V. A. (with Tarakanov, A. F.) Minimization of nonsmooth functionals of maximum type in control problems with phase constraints. (Russian) 91m:49003
- Hager, William W. Multiplier methods for nonlinear optimal control. 91c:49033
- Howe, R. M. see Vinh, N. X.; et al. 91b:70025
- Jurdjević, Velimir (with Kogan, Jacob) Optimality of extremals for linear systems with quadratic costs. 91a:49015
- Singular optimal problems. 91b:49038
- Klötzler, Rolf Eine neue Variante einer Schachtelaufgabe. (English summary) [A new variant of a boxing problem] 91b:93110
- Kogan, Jacob Necessary and sufficient conditions for optimality in linear-quadratic problems of optimal control. 91b:49036
- see also Jurdjević, Velimir. 91a:49015
- Kukushkin, A. P. The van Bouchout problem in a Riemannian space. (Russian) 91d:58057
- La, Ping see Vinh, N. X.; et al. 91b:70025
- Mel'nikan, A. A. A time-optimality problem with a search for the goal point. 91c:49035
- Motreanu, D. Strong accessibility with respect to a submersion. (Russian summary) 91c:33009



- Parlov, V. V. The averaging method in the problem of optimization of dynamical systems with interval constraints. (Russian) **91c:49031**
- Schlittler, Heinz Regularity properties of optimal trajectories: recently developed techniques. **91d:49043**
- Shevchenko, T. D. Nondifferentiable problems of controlling pencils of trajectories. (Russian) **91b:49024**
- Sussmann, Héctor J. Synthesis, presynthesis, sufficient conditions for optimality and subanalytic sets. **91c:33038**
- Tarakanov, A. F. *see* Gorelik, V. A., **91m:49003**
- Vasil'ev, A. Ya. The optimal control method in an extremal problem in a class of solutions of the Löwner-Kufarev equation. **91c:30027**
- Vinh, N. X. (with Lu, Ping; Howe, R. M.; Gilbert, E. G.) Optimal interception with time constraint. **91h:70025**
- Zhou, Xun Yu Maximum principle, dynamic programming, and their connection in deterministic control. **91c:49048**

#### 49K20 Problems involving partial differential equations

- Badalov, F. B. Solution of an optimal control problem for equations of hyperbolic type. (Russian) (Not in MR)
- Barbu, Viorel The minimal time function for the nonlinear diffusion equation. **91h:49027**
- Beilbas, S. A. Dynamic programming approach to the optimal control of systems governed by Goursat-Darboux equations. **91c:49028**
- Chen, Guan Rong A state-constrained minimum-energy optimal control problem for a steady-state PDE system. (Chinese summary) (Not in MR)
- Danilov, V. Ya. (with Mel'nik, V. S.) Optimization problems for equations of hydrodynamic type. (Russian. English summary) **91h:49028**
- Demidenko, N. D. Problems in optimization of information-measuring systems. **91h:49029**
- Esfandiari, Ramin S. *see* Sadek, I. S., **91b:49037**
- Flytzanis, Elias (with Papageorgiou, Nikolaos S.) Optimality conditions for a class of nonlinear distributed parameter control systems. **91m:49020**
- Gashimov, S. A. Optimal control of loaded elliptic equations. (Russian) (see **91m:00015**)
- Kirin, N. E. (with Sadovin, N. S.) The interpolation method for successive damping in a nonlinear problem of heat control. (Russian) (see **91i:65003**)
- Korotkiĭ, A. I. An optimization problem of the bending of a membrane by concentrated stresses. (Russian) **91h:49025**
- Lods, Yvonne Une formulation mixte pour un assemblage de poutres adaptée à la résolution d'un problème d'optimisation. (English summary) [A mixed formulation for a model of junctions of beams adapted to the solution of an optimization problem] **91j:49033**
- L'vin, S. Ya. Linear optimal control problems. Solution of a Stokes system with minimal energy. (Russian) **91h:49030**
- Mansimov, K. B. On the theory of necessary conditions for optimality in a control problem for systems with distributed parameters. **91d:49028**
- Conditions for second-order optimality in Goursat-Darboux systems in the presence of constraints. **91d:49029**
- Melikov, T. K. Recurrence conditions for optimality of singular controls in Goursat-Darboux systems. (Russian. English and Azerbaijani summaries) **91i:49023**
- Mel'nik, S. A. Optimality "in the small" of parabolic stochastic systems. (Russian) (see **91j:60001**)
- Mel'nik, V. S. *see* Danilov, V. Ya., **91h:49028**
- Morozkin, N. D. A method for testing the optimality of L. S. Pontryagin's extremals in a heat problem. (Russian) (see **91i:65003**)
- Murzahev, Z. N. Optimal control of a hybrid system with wave links. (Russian) **91c:49035**
- Papageorgiou, Nikolaos S. *see* Flytzanis, Elias, **91m:49020**
- Peng, Shi Ge Analyse asymptotique et problème homogénéisé en contrôle optimal avec vibrations rapides. [Asymptotic analysis and a homogenized problem in optimal control with rapid vibrations] **91a:49011**
- Petrov, I. I. Identification and optimal control of a distributed parameter system. **91f:49030**
- Rousselet, Bernard Optimisation d'un système surfacique (équation de la chaleur). [Optimization of a surface system (the heat equation)] **91a:49012**
- Sadek, I. S. (with Esfandiari, Ramin S.) Optimal active control of distributed-parameter systems with applications to a Rayleigh beam. **91h:49037**
- Sadovin, N. S. *see* Kirin, N. E., (**91i:65003**)
- Silla, Nabil An optimal control problem for the linear Schrödinger equation. (Russian) (see **91m:00015**)
- Tazhibasov, B. D. Optimality conditions in a control problem. (Russian) **91g:49009**
- Teimurov, R. A. A control problem with a moving source for heat equations. (Russian) (see **91m:00015**)
- Tröltzsch, F. On the semigroup approach for the optimal control of semilinear parabolic equations including distributed and boundary control. (German and Russian summaries) **91a:49013**
- Xu, Yong Zhi An optimal control problem for the Helmholtz equation in a stratified shallow ocean. **91h:49024**
- Items with secondary classifications in 49K20
- Avgerinos, Evgenios P. (with Papageorgiou, Nikolaos S.) On the sensitivity and relaxability of optimal control problems governed by nonlinear evolution equations with state constraints. **91c:49020**
- Barbu, Viorel ★ Metode matematice în optimizarea sistemelor diferențiale. (Romanian) [Mathematical methods for the optimization of differential systems] **91h:49001**
- Bardi, Martino (with Perthame, Benoît) Exponential decay to stable states in phase transitions via a double log-transformation. **91m:35021**
- Barron, E. N. Application of viscosity solutions of infinite-dimensional Hamilton-Jacobi-Bellman equations to some problems in distributed optimal control. **91c:49050**
- Bensoussan, Alain (with Nagai, Hideo) An ergodic control problem arising from the principal eigenfunction of an elliptic operator. **91m:93142**
- Bobylyev, N. A. (with Krasnosel'skii, M. A.) Bifurcation of extremals of variational problems. **91h:47158**
- Bock, Igor (with Lovisek, Ján) Optimal control in coefficients for elliptic variational inequalities and optimality conditions. **91g:49003**
- Burgmeier, Peter Controllability of systems with distributed parameters that can be described by  $m$ th-order Goursat-Darboux systems. **91i:93015**
- Buttazzo, Giuseppe (with Dal Maso, Gianni) Shape optimization for Dirichlet problems: relaxed solutions and optimality conditions. **91c:49005**
- Chan, Wai Leung (with Guo, Bao Zhu) Optimal birth control of population dynamics. II. Problems with free final time, phase constraints, and mini-max costs. **91c:92045**
- Ch'en, Mu Yang (with Jarny, Y.) Excitation optimale d'un système parabolique en vue de l'identification. (English summary) [Optimal input of a parabolic system with an eye to identification] **91h:93023**
- Dal Maso, Gianni *see* Buttazzo, Giuseppe, **91c:49005**
- Danilov, V. Ya. Some optimization problems for a parabolic equation in acoustics. (Russian) **91i:49040**
- Dietrich, Helmut An application of the duality theory of Toland to a problem of optimal control. **91i:49037**
- Dunskaya, N. V. (with Pyatnitskii, E. S.) Synthesis of the control of mechanical systems by the goal potential method. **91g:70023**
- Fabre, Caroline Équation des ondes avec second membre singulier et application à la contrôlabilité exacte. (English summary) [Wave equation with singular second member and application to exact controllability] **91d:93008**
- Fattorini, H. O. (with Frankowska, Halina) Explicit convergence estimates for suboptimal controls. II. (Russian summary) **91j:49044**
- Fosdick, Roger L. (with Heriot, Brian) The Maxwell relation and Eshelby's conservation law for minimizers in elasticity theory. **91c:73023**
- Frankowska, Halina *see* Fattorini, H. O., **91j:49044**
- Fujii, Nobuo Second-order necessary conditions in a domain optimization problem. **91d:49045**
- Gilliam, D. S. (with Mair, B. A.; Martin, Clyde Franklin) An inverse convolution method for regular parabolic equations. **91m:49040**
- Guo, Bao Zhu *see* Chan, Wai Leung, **91c:92045**
- He, Zheng-Xu (with Moroşanu, Gheorghe) Optimal control of biharmonic variational inequalities. **91c:49015**
- Hertog, Brian *see* Fosdick, Roger L., **91c:73023**
- Ho, Lop Fat Exact controllability of the one-dimensional wave equation with locally distributed control. **91h:93014**
- Ito, Kazufumi (with Kunisch, Karl) The augmented Lagrangian method for parameter estimation in elliptic systems. **91d:35228**
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- Kenmochi, Nobuyuki Heat conduction with a class of automatic heat source controls. (see **91g:00044**)
- (with Kubo, Masahiro) Periodic solutions of parabolic-elliptic obstacle problems. **91j:35156**
- Khludnev, A. M. Optimal control of the form of a stamp in a contact problem for a plate. (Russian) **91h:73081**
- Kokhan, A. A. Optimal control of high-intensity heat fields. (Russian) **91i:93061**
- Krasnosel'skii, M. A. *see* Bobylyev, N. A., **91h:47158**
- Kubo, Masahiro *see* Kenmochi, Nobuyuki, **91j:35156**
- Kunisch, Karl *see* Ito, Kazufumi, **91d:35228**
- Łedźwiec-Kowalewska, Urszula On the optimal control problems of parabolic equations with an infinite number of variables and with equality constraints. **91i:35197**
- Liu, Wen Bin (with Rubio, J. E.) Optimality conditions for elliptic variational inequalities. **91j:49013**
- Lovisek, Ján *see* Bock, Igor, **91g:49003**
- Mair, B. A. *see* Gilliam, D. S.; et al., **91m:49040**
- Martin, Clyde Franklin *see* Gilliam, D. S.; et al., **91m:49040**
- Matichuk, M. I. Solution of a parabolic boundary value problem with singularities, and optimal control problems. (Russian) **91d:35098**
- Moroşanu, Gheorghe *see* He, Zheng-Xu, **91c:49015**
- Musabekov, K. S. A method for solving a problem of the optimal control of a process in a chemical reactor. (Russian) **91h:93111**
- Nagai, Hideo *see* Bensoussan, Alain, **91m:93142**
- Nagase, Noriaki (with Nisio, Makiko) Optimal controls for stochastic partial differential equations. **91c:93098**
- Nazarov, S. A. Perturbations of solutions of the Signorini problem for a second-order scalar equation. **91c:35056**
- Nisio, Makiko *see* Nagase, Noriaki, **91c:93098**
- Özbay, Hilay (with Tannenbaum, Allen) A skew Toeplitz approach to the  $H^\infty$  optimal control of multivariable distributed systems. **91h:93060**
- Papageorgiou, Nikolaos S. *see* Avgerinos, Evgenios P., **91c:49020**
- Perthame, Benoît *see* Bardi, Martino, **91m:35021**
- Pyatnitskii, E. S. *see* Dunskaya, N. V., **91g:70023**
- Raitums, Uldis ★ Задачи оптимального управления для эллиптических уравнений. (Russian) [Optimal control problems for elliptic equations] **91a:49001**
- Rodríguez, José-Francisco On a steady-state two-phase Stefan problem with extraction. (see **91m:35004**)
- Rubio, J. E. *see* Liu, Wen Bin, **91j:49013**
- Srochko, V. A. *see* Vasil'ev, O. V.; et al., **91f:90002**
- Stojanovic, Srdjan Optimal damping control and nonlinear elliptic systems. **91m:49001**
- Tannenbaum, Allen *see* Özbay, Hilay, **91h:93060**
- Terletskii, V. A. *see* Vasil'ev, O. V.; et al., **91f:90002**
- Tröltzsch, F. Approximation of nonlinear parabolic boundary control problems by the Fourier method—convergence of optimal controls. **91m:49034**
- Urzhumova, D. S. Control of the coefficient multiplying the highest derivative in the Goursat problem. (Russian) **91f:35045**
- Vasil'ev, O. V. (with Srochko, V. A.; Terletskii, V. A.) ★ Методы оптимизации и их приложения. Часть 2. (Russian) [Optimization methods and their applications. Part 2] **91f:90002**
- Wang, Run Jie An optimal boundary control problem for parabolic systems of boundary observation on complex connected domains. (Chinese. English summary) **91f:49042**

- Zhakupova, A. A. A control problem in coefficients. (Russian) 91f:35047  
 Zhong, Wan Xie (with Zhong, Xiang-Xiang) Computational structural mechanics. Optimal control and semi-analytical method for PDE. 91k:73107  
 Zhong, Xiang-Xiang see Zhong, Wan Xie, 91k:73107

#### 49K22 Problems involving integral equations

Items with secondary classifications in 49K22

- Pelczewski, Jerzy Optimization of the system described by Fredholm's integral equation. 91a:93031  
 Štodička, Marián Error estimate of approximate solution for a quasilinear parabolic integrodifferential equation in the  $L_p$ -space. (Russian and Slovak summaries) 91d:45010

#### 49K24 Problems involving differential inclusions

- Azanov, M. V. see Khrustalev, M. M., 91j:49034  
 Hejmo, Władysław On the singular phenomena in planar closed-loop systems. (French summary) 91h:49026  
 Huang, Yu (with Zhao, Yi) First-order necessary conditions for the optimal control of multivalued nonlinear systems. (Chinese. English summary) 91h:49027  
 Khrustalev, M. M. (with Azanov, M. V.) A parametric family of generating functions and sufficient conditions for the optimality of discontinuous systems. 91j:49034  
 Makhmudov, E. N. Necessary and sufficient conditions for an extremum for discrete and differential inclusions with distributed parameters. 91c:49036  
 Minchenko, L. I. Necessary conditions for the optimality of trajectories of differential inclusions. 91k:49031  
 Otakulov, S. On conditions for optimality in a minimax control problem for differential inclusions. (Russian. Uzbek summary) 91c:49037  
 Papageorgiou, Nikolaos S. Relaxation of infinite-dimensional variational and control problems with state constraints. 91c:49038  
 Vinter, Richard B. (with Wolenski, Peter R.) Coextremals and the value function for control problems with data measurable in time. 91k:49032  
 Wolenski, Peter R. see Vinter, Richard B., 91k:49032  
 Zhao, Yi see Huang, Yu, 91h:49027

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- Bressan, Alberto Differential inclusions with nonclosed, nonconvex right-and side. 91h:34019  
 Papageorgiou, Nikolaos S. On infinite-dimensional control systems with state and control constraints. 91c:49018  
 Pashaei, A. B. A game-theoretic problem of guidance in systems that are discontinuous with respect to the controls. 91k:90243  
 Suslov, S. I. Closure of a set of measurable selectors. (Russian) 91e:28010

#### 49K25 Problems involving equations with retarded arguments [see also 34K35]

- Aida-zade, K. R. (with Mamedov, S. N.) Solution of control problems with nonmonotone functions of delay. (Russian. English and Azerbaijani summaries) (Not in MR)  
 Aysveich, V. V. Singular controls for systems with variable delay. (Russian) 91b:49025  
 Andreeva, E. A. Necessary and sufficient conditions for optimality in the case of discrete controlled processes. 91c:49029  
 Angell, T. S. (with Kirsch, Andreas) On the necessary conditions for optimal control of retarded systems. 91j:49035  
 Chentsov, A. G. see Serov, V. P., 91d:49023  
 Ibrahim, E. Y. (with Lovass-Nagy, V.; Mukundan, R.; Powers, David L.; Schilling, Robert J.) A note on optimal control of linear time-delay systems using descriptor-variable theory. 91j:49036  
 Kirsch, Andreas see Angell, T. S., 91j:49035  
 Kolmanovskii, V. B. (with Koroleva, N. I.) Optimal control of bilinear hereditary systems of their applications. (Not in MR)  
 Koroleva, N. I. see Kolmanovskii, V. B., (Not in MR)  
 Lee, E. Bruce (with You, Yun Cheng) Quadratic optimization for infinite-dimensional linear differential difference type systems: syntheses via the Fredholm equation. 91a:49014  
 Lovass-Nagy, V. see Ibrahim, E. Y.; et al., 91j:49036  
 Mamedov, S. N. see Aida-zade, K. R., (Not in MR)  
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 — Optimality conditions in nonlinear inertial control systems with delay. 91h:49033  
 — On the theory of inertial control systems with delay. (Russian) (Not in MR)  
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- Bendjilali, Boualem On the stability of a retarded functional-differential equation Edgeworth process. 91g:90040

- Bogataj, L. The adjoint operator of the infinitesimal generator for the linear differential-difference equation with delays in the state and in the control. (Slovenian summary) 91m:49022

- Sensitivity of linear-quadratic systems with delay in the state and in the control for perturbation of the system matrices. (Slovenian summary) 91m:49023  
 Kozlov, V. N. (with Shashikhin, V. N.) Synthesis of large-scale systems with delay in the cross connections. 91k:93007  
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#### 49K27 Problems in abstract spaces [See 90C48, 93C25]

- Agrachiev, A. A. (with Gamkrelidze, R. V.) Symplectic geometry for optimal control. 91e:49032  
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 Basile, N. (with Mininni, M.) An extension of the maximum principle for a class of optimal control problems in infinite-dimensional spaces. 91h:49029  
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 — Convergence of suboptimal controls: the point target case. 91c:49039  
 — (with Frankowska, Halina) Necessary conditions for infinite-dimensional control problems. 91k:49034  
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 Khachatryan, R. A. Necessary conditions for an extremum in problems with constraints of equality type. (Russian. Armenian summary) 91m:49021  
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 Maruyama, Yukihiko Second-order necessary conditions for nonlinear optimization problems in Banach spaces and their application to an optimal control problem. 91h:49030  
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 Phenichnyi, R. N. Necessary conditions for an extremum, penalty functions and regularity. 91c:49041  
 Strekalovskii, A. S. On the problems of a global extremum in nonconvex extremal problems. 91i:49026  
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- Abreu, J. (with Etcheberry, A.) Hahn-Banach and Banach-Steinhaus theorems for convex processes. 91j:46007  
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- Xu, Ning Xiong A class of optimization problems for infinite-dimensional linear systems. (Chinese. English summary) (Not in MR)
- Yong, Jiong Min Maximum principle of optimal controls for a nonsmooth semilinear evolution system. 91f:49024
- Zălinescu, Constantin Stability for a class of nonlinear optimization problems and applications. 91d:90075

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- (Allou, Amit) see Troch, I., 91j:49042
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- Bistrickas, Vilnius Mixed problems of calendar programming. (Russian. English and Lithuanian summaries) (Not in MR)
- Davranov, B. E. Optimization of linear dynamical systems according to a quadratic quality criterion in a class of relay controls. (Russian) (Not in MR)
- Gyarmati, S. E. On the discrete Lyapunov problem. 91c:49042
- Hagle, Julia L. (with Beas, James C.; Smith, Robert L.) Deterministic equivalence in stochastic infinite horizon problems. 91i:49027
- Jurdjevic, Velimir (with Kogan, Jacob) Optimality of extremals for linear systems with quadratic costs. 91a:49015
- Singular optimal problems. 91b:49038
- Kalashnikov, A. L. Order properties of a regularizing sequence in an optimal control problem. (Russian) (see 91g:00034)
- Kirichenko, S. B. see Pshenichnyi, B. N., 91g:49011
- Klitzner, Rolf Theory and applications of optimal distributional control. 91j:49041
- Kogan, Jacob see Jurdjevic, Velimir, 91a:49015
- Pshenichnyi, B. N. (with Kirichenko, S. B.) On the optimal impulse correction problem. 91g:49011
- (Segr, Reuben) see Troch, I., 91j:49042
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- Sussmann, Héctor J. Envelopes, high-order optimality conditions and Lie brackets. 91d:49026
- Troch, I. Comments on: "Driving a linear constant system by a piecewise constant control" [Internat. J. Control 47 (1988), no. 3, 815-825; MR 89b:49055] by A. Ailon and R. Segr. 91j:49042

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- Dikumar, V. V. (with Milyutin, A. A.) ★ Качественные и численные методы в принципе максимума. (Russian) [Qualitative and numerical methods in the maximum principle] 91b:49001
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- Falcone, M. Corrigenda: "A numerical approach to the infinite horizon problem of deterministic control theory" [Appl. Math. Optim. 15 (1987), no. 1, 1-13; MR 88c:49025]. 91b:49048b
- see also Tidball, Mabel Maria, 91k:49048a
- Gabassov, R. F. (with Kirillova, F. M.; Kostyukova, O. I.) A finite algorithm for optimization of dynamical systems in a class of inertial controls. (Russian) 91c:49058
- Hyslop, Gregory L. (with Schittler, Heinz; Tarn, Tzyh Jong) Optimal periodic output feedback control for linear time-invariant systems. 91a:49024
- Kalishia, A. L. An algorithm for the asymptotic solution of a singularly perturbed linear time-optimality problem. 91b:49044
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- Lamabhi-Lagarigue, Françoise (with Stefani, Gianna) Singular optimal control problems: on the necessary conditions of optimality. 91a:49024
- Lavrov, Yu. G. see Enaleev, A. K., 91m:93059
- Maksimov, K. B. On the theory of necessary conditions for optimality in a control problem for systems with distributed parameters. 91f:49028
- Markus, Lawrence Control of quasi-differential equations. 91m:93020
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- Mordukhovich, Boris S. Optimization of discrete control systems. (Russian) 91a:49020
- Morozov, S. F. (with Sumin, M. I.) Optimal control of sliding modes of discontinuous dynamical systems. 91a:49025
- Nistri, P. (with Zecca, Pietro) An optimal control problem in  $L^\infty$ . 91b:49036
- Quintela Estevez, Peregrina Critical points in the energy of hyperelastic materials. (French summary) 91c:73026
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- Yong, Jiong Min A zero-sum differential game in a finite duration with switching strategies. 91m:90223
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- Grzybowski, A. Minimax control of a system which cannot be observed without error. 91c:49043

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- Guevko, S. V. (with Israilov, I. I.) Construction of an optimal guaranteed control in a linear differential game. (Russian) 91b:90239
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- Israilov, I. I. see Guevko, S. V., 91b:90239
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- Otakulov, S. On conditions for optimality in a minimax control problem for differential inclusions. (Russian. Uzbek summary) 91c:49037
- Zabotina, I. Ya. On the minimization of the maximum function of a special type. (Russian) 91j:90085

#### 49K40 Sensitivity of optimal solutions in the presence of perturbations

- Ait, Walter Stability of solutions for a class of nonlinear cone constrained optimization problems. I. Basic theory. 91d:49027
- Stability of solutions for a class of nonlinear cone constrained optimization problems. II. Application to parameter estimation. 91d:49028
- Arutyunov, A. V. Perturbations of extremal problems with constraints, and necessary conditions for optimality. (Russian) 91a:49016
- Belokopytov, S. V. see Dmitriev, M. G.; et al., 91i:49029
- Bogataj, L. The adjoint operator of the infinitesimal generator for the linear differential-difference equation with delays in the state and in the control. (Slovenian summary) 91m:49022
- Sensitivity of linear-quadratic systems with delay in the state and in the control for perturbation of the system matrices. (Slovenian summary) 91m:49023
- Caputo, Michael R. How to do comparative dynamics on the back of an envelope in optimal control theory. 91g:49012
- Conte, I. M. Régularité du problème de commande optimale à contraintes sous forme intégrale. [Regularity of the optimal control problem with constraints in integral form] (Not in MR)
- Dmitriev, M. G. (with Belokopytov, S. V.; Gaipov, M. A.) Asymptotic behavior of the solution of a nonlinear discrete optimal control problem with a small step without constraints on the control (justification). II. (Russian. English summary) 91i:49029
- Dmitruk, A. V. Fine theorems on the relaxing of constraints on equality in an optimal control problem that is linear with respect to the control. 91b:49031
- Fattorini, H. O. (with Frankowska, Halina) Explicit convergence estimates for suboptimal controls. I. (Russian summary) 91j:49043
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- Gaipov, M. A. Asymptotic behavior of the solution of a nonlinear discrete optimal control problem with a small step without constraints on the control (formalism). I. (Russian. English summary) 91i:49028
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- Glizer, V. Ya. Singular perturbations in a stochastic linear-quadratic optimal control problem. 91c:49044
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- Kenney, Charles (with Hewer, Gary) The sensitivity of the algebraic and differential Riccati equations. 91a:49017
- Kornev, V. V. Well-posedness of a linearly convex problem of optimal control with a fixed right end. (Russian) (see 91j:00017)
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- Mao, Cheng Chi (with Lin, Wei Sung) Decentralized control of interconnected systems with unmodelled nonlinearity and interaction. 91b:49039
- Meeker, L. David Measurement stability of time-optimal feedback control of two-input strictly normal linear systems. 91f:49035
- Morris, K. A. Robustness of controllers designed using Galerkin type approximations. 91a:49018
- Panchenko, A. N. Generalized solutions of ill-posed extremal problems. (Russian) 91k:9037
- Praagman, C. see Zhu, Si Quan; et al., 91a:49019
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- Attouch, Hedy (with Wets, Roger J.-B.) Epigraphical analysis. 91g:90161
- Argenteas, Evgenios P. (with Papageorgiou, Nikolaos S.) On the sensitivity and relaxability of optimal control problems governed by nonlinear evolution equations with state constraints. 91c:49020
- Barmish, B. Ross (with Tempo, Roberto) The robust root locus. 91f:93045
- Bugnos, F. J. On the convergence of guaranteed state observation. (Russian summary) 91j:93056
- Bursov, I. A. see Emel'yanov, S. V.; et al., 91k:93049
- Caputo, Michael R. Comparative dynamics via envelope methods in variational calculus. 91k:90013
- De Arcangelis, Riccardo Compactness and convergence of minimum points for a class of nonlinear nonequicoercive functionals. 91i:49009
- Dontchev, A. L. Equivalent perturbations and approximations in optimal control. 91b:49005



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- Gabasov, R. F. (with Krakhotko, V. V.) Optimization of dynamical control systems with rapidly changing parameters. (Russian. English summary) **91i:49035**
- Georgiou, Tryphon T. (with Smith, Malcolm C.) Optimal robustness in the gap metric. **91i:93120**
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- Haslinger, Jaroslav (with Horák, Václav) On identification of critical curves. (Russian and Czech summaries) **91d:49005**
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- Horák, Václav see Haslinger, Jaroslav, **91d:49005**
- Ikedá, Masao (with Šiljak, Dragoslav D.) Optimality and robustness of linear quadratic control for nonlinear systems. **91d:93038**
- Kiselev, Yu. N. A scheme for continuation with respect to a parameter in a nonlinear boundary value problem of the maximum principle. (Russian) **91k:49024**
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- Krakhotko, V. V. see Gabasov, R. F., **91i:49035**
- Liu, De Gang see Zhang, Xiang Sun, **91m:90172**
- Nefedov, V. I. Error estimation in convex polynomial problems of optimization. **91c:90109**
- Norkin, V. I. ★ Устойчивость стохастически оптимизационных моделей и статистические методы стохастического программирования (по материалам ИААС). (Russian) [Stability of stochastic optimization models and statistical methods in stochastic programming (from reports of the International Institute of Applied Systems Analysis)] **91i:90071**
- Papageorgiou, Nikolaos S. Relaxation of infinite-dimensional variational and control problems with state constraints. **91c:49038**
- see also Argerinos, Evgenios P., **91c:49020**
- Penot, Jean-Paul (with Sterna-Karwat, Alicia) Parametrized multicriteria optimization; order continuity of the marginal multifunctions. **91d:90085**
- Pilis, P. V. The behavior of the controllability set of the van der Pol equation with control when the parameter tends to infinity. **91m:93022**
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- Sastry, S. Shankar (with Hauser, John E.; Kokotović, P. V.) Zero dynamics of regularly perturbed systems may be singularly perturbed. **91c:93040**
- Šiljak, Dragoslav D. see Ikeda, Masao, **91d:93038**
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- see also Georgiou, Tryphon T., **91i:93120** and **91c:93076**
- Soh, C. B. Invariance of the aperiodic property for polynomials with perturbed coefficients. **91k:93056**
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- Sumin, V. I. A foundation for gradient methods for distributed optimal control problems. **91c:49012**
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- Tiba, Dan (with Tiba, M.) Approximation for control problems with pointwise state constraints. **91d:49013**
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- Ward, James E. (with Wendell, Richard E.) Approaches to sensitivity analysis in linear programming. **91m:90104**
- Wendell, Richard E. see Ward, James E., **91m:90104**
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- Zhang, Xiang Sun (with Liu, De Gang) A note on the continuity of solutions of parametric linear programs. **91m:90172**
- Zheng, Quan Robust analysis and global optimization. **91m:90166**

#### 49K45 Problems involving randomness [see also 93E20]

- Cherkasov, I. D. Optimal control of a search for a two-dimensional diffusion process of special form. **91k:49038**
- Davis, Mark H. A. Necessary conditions for optimality in the control of piecewise-deterministic Markov processes. **91a:49020**
- see also Ribeiro do Val, João Bosco, **91d:49042**
- Duda, József The parametric optimization method for systems with delay using the Lyapunov function. (Polish. English summary) **91f:49036**
- Flandoli, Franco Solution and control of a bilinear stochastic delay equation. **91c:49045**
- Hernández-Lerma, Onésimo (with Lasserre, Jean Bernard) Average cost optimal policies for Markov control processes with Borel state space and unbounded costs. **91k:49039**
- Khametov, V. M. Optimal control with delay of jumplike random processes. **91b:49040**
- Kibzun, A. I. (with Malyshev, V. V.) Probabilistic optimization problems. **91m:49024**
- Lasserre, Jean Bernard see Hernández-Lerma, Onésimo, **91k:49039**
- Makhmudov, N. I. General necessary optimality conditions for stochastic systems with controllable diffusion. (Russian) **91k:49040**
- Malyshev, V. V. see Kibzun, A. I., **91m:49024**
- Nakomechnyi, A. N. Extremal problems with rare events. I. **91m:49025**
- Paine, T. B. see Trout, Marvin D., **91k:49043**
- Peng, Shi Ge A general stochastic maximum principle for optimal control problems. **91c:49013**
- Pokotilo, V. G. see Pashenichnyi, B. N., **91k:49041**
- Pashenichnyi, B. N. (with Pokotilo, V. G.) On the problem of the optimal girth of sets. **91k:49041**
- Ribeiro do Val, João Bosco (with Davis, Mark H. A.) Local optimality criteria for stochastic control of piecewise deterministic processes. (Portuguese. English summary) **91k:49042**
- Shalamos, A. S. Optimal control in differential-difference systems with random time quantization. **91d:49030**
- Smirnov, I. P. Control of the probability of a system entering a given region. **91j:49045**

- Trout, Marvin D. (with Paine, T. B.) A monotone variational method for optimal probability distributions. (German summary) **91k:49043**

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- Anan'ev, B. I. (with Baisakalov, I. B.) A minimax optimal control problem for statistically uncertain systems. (Russian) **91k:93091**
- Baisakalov, I. B. see Anan'ev, B. I., **91k:93091**
- Damra, F. M. see Hsieh, Chen; et al., **91d:49036**
- (Davis, Mark H. A.) see Applied stochastic analysis, **91m:93003**
- (Elliott, Robert James) see Applied stochastic analysis, **91m:93003**
- Gaidov, Svetoslav D. On the Nash-bargaining solution in stochastic differential games. **91f:90159**
- Glizer, V. Ya. Singular perturbations in a stochastic linear-quadratic optimal control problem. **91c:49044**
- Gryzbowski, A. Minimax control of a system which cannot be observed without error. **91c:49043**
- Hsieh, Chen (with Skelton, Robert E.; Damra, F. M.) Minimum energy controllers with inequality constraints on output variances. **91d:49036**
- Hunt, K. J. (with Šebek, M.) Implied polynomial matrix equations in multivariable stochastic optimal control. **91m:93145**
- Kaňková, Vlasta A note on the minimax approach to the stochastic programming problems. (Czech summary) **91m:90124**
- Kim, D. P. ★ Методы поиска и преследования подвижных объектов. (Russian) [Methods for the search and pursuit of moving objects] **91m:90092**
- Kolyadin, V. L. (with Kravchenko, V. F.) Statistically optimal solution of operator equations when the original data have finite size. **91c:65082**
- Kravchenko, V. F. see Kolyadin, V. L., **91c:65082**
- Marinchenko, T. A. A finite-difference approach to solving a stochastic problem of optimal control. (Russian) **91b:93181**
- Ragab, M. Z. A quadratic optimal synthesis problem with failure control. (Arabic summary) **91i:93062**
- Rneilsson, T. Residence time control of systems subject to measurement noise. **91b:93184**
- Šebek, M. see Hunt, K. J., **91m:93145**
- Sethi, Suresh P. (with Taksar, M. L.) Deterministic equivalent for a continuous-time linear-convex stochastic control problem. **91b:93185**
- Skelton, Robert E. see Hsieh, Chen; et al., **91d:49036**
- Saledovich, Moshe Solution strategies for variance minimization problems. **91m:90126**
- Spivak, A. K. Approximate synthesis of some stochastic systems with a small parameter. (Russian. Tajiki summary) **91j:93126**
- Taksar, M. L. see Sethi, Suresh P., **91b:93185**
- Ward, Y. Stochastic approximation algorithm for minimax problems. **91d:49011**
- White, Douglas John Approximating the Markov property in Markov decision processes. **91c:90128**
- Whittle, P. A risk-sensitive maximum principle. **91j:93126**

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- London ★ Applied stochastic analysis. **91m:93003**
- Workshop:  
Applied Stochastic Analysis ★ Applied stochastic analysis. **91m:93003**

#### 49K99 None of the above, but in this section

- (Lin, Jing Yue) see Rava, Hans F., **91c:49046**
- Rava, Hans F. Comments on: "A discrete optimal control problem for descriptor systems" [IEEE Trans. Automat. Control 34 (1989), no. 2, 177–181; MR 90c:49048] by J. Y. Lin and Z. H. Yang. **91c:49046**
- (Yang, Zi Hou) see Rava, Hans F., **91c:49046**

#### Items with secondary classifications in 49K99

- Aleinskova, Z. M. Necessary conditions for second-order optimality of singular controls in nonlinear discrete systems with control delay. (Russian) **91b:93103**
- Makhmudov, E. N. Necessary and sufficient conditions for an extremum for discrete and differential inclusions with distributed parameters. **91c:49036**
- Mansimov, K. B. Optimization of a class of discrete two-parameter systems. (Russian) (Not in MR)
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- Kantser, N. V. Some methods for solving problems in linear dynamical programming. (Russian) **91b:49033**
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- Vinter, Richard B. (with Wolenski, Peter R.) Hamilton-Jacobi theory for optimal control problems with data measurable in time. **91k:49044**
- Wolenski, Peter R. see Vinter, Richard B., **91k:49044**
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#### 49L10 Free problems and problems involving partial differential equations

- Bardi, Martino (with Soravia, Pierpaolo) Hamilton-Jacobi equations with singular boundary conditions on a free boundary and applications to differential games. 91h:49034  
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- Kolosov, G. E. (with Livanov, K. K.) Quality analysis of a quasi-optimal control algorithm. (Russian) 91m:93060a  
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- Alt, Walter Stability of solutions for a class of nonlinear cone constrained optimization problems. I. Basic theory. 91d:49027
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- Ibiejuga, M. A. (with Rubio, J. E.; Orisamolu, I.) A penalty optimization technique for a class of regulator problems. 91g:49016
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- Palenichnyi, B. N. Necessary conditions for an extremum, penalty functions and regularity. 91c:49041
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- Zariev, S. K. \* Комбинированный метод штрафов и стохастических квазиградиентов для поиска связного максимума. (Russian) [A combined penalty and stochastic quasigradient method for the search for a connected maximum] 91m:49005
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- Zhan, Chong Xi A penalty method for a constrained extreme problem and its application. (Chinese. English summary) (Not in MR)
- Zhang, Lian Sheng (with Huang, Zhi Jian) On  $L_1$ -exact penalty functions in nonlinear Lipschitz programming. (Chinese) 91a:90153
- Zhou, Xiao Yang (with Shi, Bao Chang) A method of generalized differentiable limited-region exact penalty functions for converting an inequality-constrained problem into an unconstrained optimization. (Chinese. English summary) 91k:90193
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- Dymkov, M. P. Solution of a linear control problem by methods of the theory of entire functions. (Russian. English summary) (Not in MR)
- Gabasov, R. F. (with Krakhotko, V. V.) Optimization of dynamical control systems with rapidly changing parameters. (Russian. English summary) 91k:49035
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- Han, Ji Ye (with Hu, Xiao Dong; Liu, Jin) A unified approach to the feasible point method type for nonlinear programming with linear constraints under degeneracy and the convergence properties. 91m:90155
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— On the regularity of weak solutions of variational problems of plasticity theory. 91m:33037

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Grishin, S. A. Construction of the laws of motion with prescribed integrals. 91k:34024

Hardt, Robert (with Kinderlehrer, David) Variational principles with linear growth. 91e:73117

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Hartwig, Helga (with Klötzler, Rolf) Umpolygone größten Flächeninhalts. (English and Russian summaries) [Circumpolygons of maximal area] 91h:49042

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 Aviles, Patricio (with Giga, Yoshikazu) Singularities and rank one properties of Hessian measures. 91c:49064  
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 — (with Modica, Giuseppe; Souček, Jiří) Cartesian currents and variational problems for mappings into spheres. 91f:49053  
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 Modica, Giuseppe *see* Glaquinta, Mariano; et al., 91h:49053 and 91f:49053  
 Morgan, Frank Size-minimizing rectifiable currents. 91h:49054  
 Serapioni, R. *see* Anzellotti, G.; et al., 91k:49059  
 Souček, Jiří *see* Glaquinta, Mariano; et al., 91h:49053 and 91f:49053  
 Tamanini, Italo *see* Anzellotti, G.; et al., 91k:49059  
 Zähle, M. Absolute curvature measures. 91c:49066

Items with secondary classifications in 49Q15

- Almgren, Frederick J., Jr. (with Gurtin, Morton E.) A mathematical contribution to Gibbs's analysis of fluid phases in equilibrium. 91h:76009  
 Bouchitté, Guy Représentation intégrale de fonctionnelles convexes sur un espace de mesures. II. Cas de l'épi-convergence. (Italian summary) [Integral representation of convex functionals on a space of measures. II. The case of epi-convergence] 91h:46047  
 Cherkasova, E. A. *see* Dyubin, G. N., 91m:28011  
 Colli, Pierluigi (with Comincioli, Valeriano; Naldi, Giovanni; Torelli, Alessandro) A mathematical study of the plasticity effects in muscle contraction. 91k:73090  
 Comincioli, Valeriano *see* Colli, Pierluigi; et al., 91k:73090  
 Dal Maso, Gianni (with Musina, Roberta) An approach to the thin obstacle problem for variational functionals depending on vector valued functions. 91c:35107  
 Dyubin, G. N. (with Cherkasova, E. A.) Measures that are generated by set functions. (Russian) 91m:28011  
 Glaquinta, Mariano (with Modica, Giuseppe; Souček, Jiří) Liquid crystals: relaxed energies, dipoles, singular lines and singular points. 91m:58034  
 — (with Modica, Giuseppe; Souček, Jiří) Erratum and addendum to: "Cartesian currents, weak diffeomorphisms and existence theorems in nonlinear elasticity" [Arch. Rational Mech. Anal. 106 (1989), no. 2, 97–159; MR 90c:58044]. 91h:58050  
 Gordon, Russell A. The McShane integral of Banach-valued functions. 91m:26010  
 Gurtin, Morton E. *see* Almgren, Frederick J., Jr., 91h:76009  
 Horiuchi, Toshio On the imbeddings  $C_b^1(\bar{\Omega}) \rightarrow C^1(\bar{\Omega}) \rightarrow C^{0,1}(\bar{\Omega}; d)$ . 91h:46032  
 Modica, Giuseppe *see* Glaquinta, Mariano; et al., 91h:58050 and 91m:58034  
 Musina, Roberta *see* Dal Maso, Gianni, 91c:35107  
 Naldi, Giovanni *see* Colli, Pierluigi; et al., 91k:73090  
 Rother, Wolfgang<sup>2</sup> (with Zähle, M.) A short proof of principal kinematic formula and extensions. 91a:53106  
 Souček, Jiří *see* Glaquinta, Mariano; et al., 91h:58050 and 91m:58034  
 Torelli, Alessandro *see* Colli, Pierluigi; et al., 91k:73090  
 Trudinger, Neil S. A priori bounds for graphs with prescribed curvature. 91a:53016  
 Valadier, Michel Young measures. 91j:28006  
 Zähle, M. *see* Rother, Wolfgang<sup>2</sup>, 91a:53106

#### 49Q20 Variational problems in a geometric measure-theoretic setting

- Choe, Jaigyoung On the existence and regularity of fundamental domains with least boundary area. 91e:49040  
 Dao Trung Thi Parametrization spaces and spaces of parametrized multivariates. (Russian) 91g:49020

Demengel, Françoise (with Rauch, Jeffrey) Weak convergence of asymptotically homogeneous functions of measures. 91i:49046

Fa, Joseph H. G. Monge-Ampère functions. I, II. 91d:49048

Fuchs, Martin<sup>2</sup>  $p$ -harmonic obstacle problems. II. Extensions of maps and applications. 91m:49045

—  $p$ -harmonic obstacle problems. I. Partial regularity theory. 91m:49044

—  $p$ -harmonic obstacle problems. III. Boundary regularity. 91m:49046

Fujii, Nobuo see Goto, Yoshito, 91k:49060

Giacomelli, Corrado see Tamanini, Italo, 91j:49063

Goto, Yoshito (with Fujii, Nobuo) Second-order numerical method for domain optimization problems. 91k:49060

Kulkarni, Sanjeev R. (with Mitter, Sanjoy K.; Richardson, Thomas J.) An existence theorem and lattice approximations for a variational problem arising in computer vision. 91e:49041

Mitter, Sanjoy K. see Kulkarni, Sanjeev R.; et al., 91e:49041

Rauch, Jeffrey see Demengel, Françoise, 91i:49046

Richardson, Thomas J. see Kulkarni, Sanjeev R.; et al., 91e:49041

Tamanini, Italo (with Giacomelli, Corrado) Monotone approximation of sets of finite perimeter from inside. (Italian. English summary) 91j:49063

Zähle, M. Normal cycles and sets of bounded curvatures. 91k:49061

Items with secondary classifications in 49Q20

Almgren, Frederick J., Jr. (with Lieb, Elliott H.) The (non) continuity of symmetric decreasing rearrangement. 91k:47063

Aviles, Patricio (with Giga, Yoshikazu) Minimal currents and relaxation of variational integrals on mappings of bounded variation. 91c:49065

Bahri, Abbas ★ Critical points at infinity in some variational problems. 91h:58022

Ball, J. M. Sets of gradients with no rank-one connections. (French summary) 91k:49008

Carriero, Michele (with Leaci, Antonio) Existence theorem for a Dirichlet problem with free discontinuity set. 91k:49002

Cesari, Lamberto Discontinuous solutions of bounded variation to problems of the calculus of variations and of quasi-linear hyperbolic differential equations. Integrals of Serrin and Weierstrass. 91f:01017

(Efimov, O.) see Fomenko, A. T., 91k:58020

Feyel, Denis (with de La Pradelle, Arnaud) Mesures de Hausdorff de codimension finie sur l'espace de Wiener. (English summary) [Hausdorff measures with finite codimension on Wiener space] 91b:28008

Fomenko, A. T. ★ Variational principles of topology. 91k:58020

Giga, Yoshikazu see Aviles, Patricio, 91c:49065

Krupka, Demeter Variational sequences on finite order jet spaces. 91i:58037

de La Pradelle, Arnaud see Feyel, Denis, 91b:28008

Leaci, Antonio see Carriero, Michele, 91k:49002

Lieb, Elliott H. see Almgren, Frederick J., Jr., 91k:47063

Linnér, Anders Steepest descent as a tool to find critical points of  $f|_{k^2}$  defined on curves in the plane with arbitrary types of boundary conditions. 91j:58041

Morgan, Frank Size-minimizing rectifiable currents. 91b:49054

Motreanu, D. Transversality methods in variational and control problems. 91j:58050

Pellegrinelli, L. see Schumann, W., 91c:73057

Schumann, W. (with Pellegrinelli, L.) On the role of some integral relations for a variational principle in shell theory. (German and Russian summaries) 91c:73057

Sema, Walter Strikte Konvexität für Variationsprobleme auf dem  $n$ -dimensionalen Torus. (English summary) [Strict convexity for variational problems on the  $n$ -dimensional torus] 91k:49057

## 49Q25 Surface area

Brandi, Primo (with Salvadori, Anna) On the nonparametric integral over a BV surface. 91a:49030

Díaz Díaz, Jesús Ildefonso Static problems with free boundary in continuum mechanics. (Spanish. English summary) 91j:49064

Giacomelli, Corrado see Tamanini, Italo, 91j:49065

Rakotoson, Jean-Michel (with Temam, Roger) A co-area formula with applications to monotone rearrangement and to regularity. 91c:49067

Salvadori, Anna see Brandi, Primo, 91a:49030

Tamanini, Italo (with Giacomelli, Corrado) Approximation of Caccioppoli sets, with applications to problems in image segmentation. (Italian summary) 91j:49065

Temam, Roger see Rakotoson, Jean-Michel, 91c:49067

Tomi, Friedrich (with Ye, Rugang) The exterior plateau problem. 91j:49066

Ye, Rugang see Tomi, Friedrich, 91j:49066

Items with secondary classifications in 49Q25

Bouchitté, Guy Singular perturbations of variational problems arising from a two-phase transition model. 91d:49016

## 49Q99 None of the above, but in this section

Items with secondary classifications in 49Q99

Bratuš, A. S. Condition of extremum for eigenvalues of elliptic boundary value problems. 91m:35174

Hamburger, Christoph ★ Regularity of differential forms minimizing degenerate elliptic functionals. 91d:58048

Montgomery, R. Isoholonomic problems and some applications. 91e:58043

Olver, Peter J. Invariant theory, equivalence problems, and the calculus of variations. 91c:49069

— Classical invariant theory and the equivalence problem for particle Lagrangians. I. Binary forms. 91c:58002

Shardakov, I. N. Solving boundary value problems of inhomogeneous elastic bodies by the method of geometric imbedding in a differential formulation. (Russian) 91c:73021

## 49Rxx Variational methods {For eigenvalues of operators, see 47A75.}

### 49R05 Variational approach to eigenvalues

Auchmuty, Giles Unconstrained variational principles for eigenvalues of real symmetric matrices. 91b:49055

Eydeland, Alexander (with Spruck, Joel; Turkington, Bruce) Multiconstrained variational problems of nonlinear eigenvalue type: new formulations and algorithms. 91b:49056

Kojecký, Tomáš Some functions of eigenvalues of normal operator. 91h:49045

Spruck, Joel see Eydeland, Alexander; et al., 91b:49056

Turkington, Bruce see Eydeland, Alexander; et al., 91b:49056

Items with secondary classifications in 49R05

Baur, G. (with Kratz, Werner) A general oscillation theorem for selfadjoint differential systems with applications to Sturm-Liouville eigenvalue problems and quadratic functionals. 91i:34016

Buslaev, A. P. Nonlinear spectra of matrices and extremal problems. (Russian) 91h:65051

Cao, Dao Min see Zhu, Xi Ping, 91i:35075

Conca, Carlos (with Planchard, Jacques; Vanninathan, M.) Un problème de fréquences propres en couplage fluide-structure. (English summary) [A problem of eigenfrequencies in fluid-structure coupling] 91d:73051

Ishimura, Naoyuki Nonlinear eigenvalue problem associated with the generalized capillarity equation. 91i:34030

Jiang, Mei Yue see Zhang, Gong Qing, 91m:58070

Kratz, Werner see Baur, G., 91i:34016

Li, Chi-Kwong (with Rodman, Leiba) Some extremal problems for positive definite matrices and operators. 91m:15033

Pan, Victor Fast and efficient parallel inversion of Toeplitz and block Toeplitz matrices. 91d:65055

Planchard, Jacques see Conca, Carlos; et al., 91d:73051

Rodman, Leiba see Li, Chi-Kwong, 91m:15033

Schmidt, Robert Accurate upper bounds to eigenvalues via Temple's lower-bound formula. 91m:65113

Vanninathan, M. see Conca, Carlos; et al., 91d:73051

Zhang, Gong Qing (with Jiang, Mei Yue) The Lagrange intersections for  $(CP^n, RP^n)$ . 91m:58070

Zhu, Xi Ping (with Cao, Dao Min) The concentration-compactness principle in nonlinear elliptic equations. 91i:35075

### 49R10 Rayleigh-Ritz methods

Danos, Michael Accuracy-weighted variational principle for degenerate continuum states. 91c:49054

Linden, Hansjörg Methoden der Zwischenprobleme zweiter Art bei Schranken für Eigenwerte rationaler Eigenwertaufgaben. [Methods of intermediate problems of the second kind in bounds for eigenvalues of rational eigenvalue problems] 91c:49068

Items with secondary classifications in 49R10

Dikarev, V. A. Applicability of the Ritz method to a class of functionals in the theory of generalized natural oscillations. (Russian) 91m:35008

Kampowsky, Winfried Zur Approximation von Steueraufgaben mit Evolutionsgleichungen. (English and Russian summaries) [On the approximation of control problems with evolution equations] 91k:49035

Liu, Jia Quan Bifurcation for potential operators. 91m:58024

### 49R20 Linear operators in Hilbert spaces

Items with secondary classifications in 49R20

Abramov, Yu. Sh. Pencils of waveguide type and related extremal problems. (Russian) 91i:47017

Kojecký, Tomáš Iterative solution of eigenvalue problems for normal operators. (Russian and Czech summaries) 91c:47016

Linden, Hansjörg Methoden der Zwischenprobleme zweiter Art bei Schranken für Eigenwerte rationaler Eigenwertaufgaben. [Methods of intermediate problems of the second kind in bounds for eigenvalues of rational eigenvalue problems] 91c:49068

Liu, Jia Qi see Liu, Zhen Yue, 91c:65039

Liu, Zhen Yue (with Liu, Jia Qi) A class of variational methods for solving ill-posed problems. (Chinese. English summary) 91c:65039

Ottavio, Noël Méthode de décomposition fonctionnelle adaptée au cadre interactif de la CAO. (English summary) [A functional breakdown method adapted to interactive CAD environments] 91f:65175

### 49R99 None of the above, but in this section

Items with secondary classifications in 49R99

Artola, Michel (with Cessenat, Michel) Sur un problème raide en homogénéisation elliptique. (English summary) [Homogenization for a stiff elliptic problem] 91j:35033

Cessenat, Michel see Artola, Michel, 91j:35033

Cimmelli, Vito Antonio (with Starita, Giulio) Nonlocal variational theories for systems with an interface. 91g:73003

Esteban, Maria J. Nonsymmetric ground states of symmetric variational problems. 91m:35073

Jiang, Qing see Li, Hao<sup>2</sup>; et al., 91j:73009

Li, Hao<sup>2</sup> (with Lü, Yun Bing; Jiang, Qing) Noether's theory and its application to continuum mechanics. (Chinese) 91j:73009

Lü, Yun Bing see Li, Hao<sup>2</sup>; et al., 91j:73009

Starita, Giulio see Cimmelli, Vito Antonio, 91g:73003



## 49S05 Variational principles of physics

- Adams, Noah P. *see* Banerjee, Ajit, 91d:49049  
 Banerjee, Ajit (with Adams, Noah P.) Dynamics of classical systems based on the principle of stationary action. 91d:49049  
 Bychenkov, V. A. (with Krysov, S. V.) Agreement conditions on moving boundaries in a problem on the conditional extremum of a functional. (Russian) (see 91g:00034)  
 Krysov, S. V. *see* Bychenkov, V. A., 91g:00034  
 Olver, Peter J. Invariant theory, equivalence problems, and the calculus of variations. 91c:49069  
 Rollins, David K. *see* Shivamoggi, Bhimsen K., 91m:49047  
 Shivamoggi, Bhimsen K. (with Rollins, David K.) A variational principle for linear and nonlinear wave propagation in a dissipative medium. 91m:49047  
 Stanomir, D. Variational principles. Lagrange formulation for hyperbolic systems. (Romanian summary) 91g:49021

### Items with secondary classifications in 49S05

- Atanacković, T. M. (with Djukić, Djorđe Slavka; Strauss, A. M.) Variational principle and error estimate for a nonlinear heat conduction problem. (German and Serbo-Croatian summaries) 91d:80006  
 Catto, Isabelle (with Lions, Pierre-Louis) La stabilité des molécules et la liaison des atomes pour des modèles de type Thomas-Fermi ou Hartree. (English summary) [Molecular stability and binding of atoms for Thomas-Fermi or Hartree models] 91g:82004  
 Carigila, Giacomo (with Morro, Angelo) Generalized symmetries and conservation laws: a Noether-type approach. 91m:58045  
 — (with Morro, Angelo) Conservation laws in viscoelasticity. 91g:73030  
 Cendra, Hernan (with Lacomba, Ernesto A.) Variational characterization of equations of motion in bundles of embeddings. 91m:58046  
 Damos, Michael Accuracy-weighted variational principle for degenerate continuum states. 91f:49054  
 Djukić, Djorđe Slavka *see* Atanacković, T. M.; et al., 91d:80006  
 Ferraris, Marco *see* Magnano, Guido; et al., 91d:58078  
 Francaviglia, Mauro *see* Magnano, Guido; et al., 91d:58078  
 Gould, Laurence I. Balance laws associated with nonlocal equations of motion for theories containing one dependent variable. 91c:73004  
 Guerra, Francesco Stochastic variational principles and quantum mechanics. 91b:81018  
 Hardt, Robert (with Kinderlehrer, David) Variational principles with linear growth. 91c:73117  
 Kinderlehrer, David *see* Hardt, Robert, 91c:73117  
 Kirkorits, Magdalen Sz. On equivalence of variational problems and its geometrical background in Lagrange spaces. 91d:58059  
 Lacomba, Ernesto A. *see* Cendra, Hernan, 91m:58046  
 Lions, Pierre-Louis *see* Catto, Isabelle, 91g:82004  
 MacKay, R. S. A variational principle for invariant odd-dimensional submanifolds of an energy surface for Hamiltonian systems. 91m:58047  
 Magnano, Guido (with Ferraris, Marco; Francaviglia, Mauro) On the Legendre transformation for a class of nonregular higher-order Lagrangian field theories. 91d:58078  
 Marra, Rossana (with Serva, Maurizio) Variational principles for a relativistic stochastic mechanics. (French summary) 91b:81012  
 Milton, Graeme W. On characterizing the set of possible effective tensors of composites: the variational method and the translation method. 91c:73006  
 Morro, Angelo *see* Carigila, Giacomo, 91g:73030 and 91m:58045  
 Ozoio de Almeida, Alfredo M. On the symplectically invariant variational principle and generating functions. 91m:58048  
 Serva, Maurizio *see* Marra, Rossana, 91b:81012  
 Strauss, A. M. *see* Atanacković, T. M.; et al., 91d:80006

## 51-XX Geometry {For algebraic geometry, see 14-XX.}

### 51-01 Instructional exposition (textbooks, tutorial papers, etc.)

- (Engel, Philip L.) *see* Soifer, Alexander, 91f:51002  
 (Erdős, Paul) *see* Soifer, Alexander, 91f:51002  
 Fücke, Rudolf ★ Zwei- und Mehrtafelprojektion. (German) [Two- and multiplane projection] 91g:51001  
 (Grünbaum, Branko) *see* Soifer, Alexander, 91f:51002  
 Millman, Richard S. (with Parker, George D.) ★ Geometry. 91j:51001  
 Parker, George D. *see* Millman, Richard S., 91j:51001  
 Pontryagin, L. S. ★ Знакомство с высшей математикой. (Russian) [Acquaintance with higher mathematics] 91f:51001  
 Qualls, E. (with Sprengel, H.-J.) ★ Geometrie in Ebene und Raum. (German) [Geometry in plane and space] 91k:51001a  
 — (with Sprengel, H.-J.) ★ Geometrie in Ebene und Raum. (German) [Geometry in plane and space] 91k:51001b  
 (Rousseau, Cecil Clyde) *see* Soifer, Alexander, 91f:51002  
 Schröder, Eberhard M. ★ Kartenwürfel der Erde. (German) [Map designs of the Earth] 91g:51002  
 Soifer, Alexander ★ How does one cut a triangle? 91f:51002  
 Sprengel, H.-J. *see* Qualls, E., 91k:51001a and 91k:51001b  
 Tabov, Iordan B. ★ Хомотетия в задачах. (Bulgarian) [Homothety in problems] 91c:51001

### Items with secondary classifications in 51-01

- (Alferieff, M. E.) *see* Kostrikin, Aleksei Ivanovich, 91b:00008  
 Banchoff, Thomas F. ★ Beyond the third dimension. 91b:00001  
 (Barbosa, Bernadete) *see* Postnikov, M., 91j:15002  
 Eisenreich, Günther ★ Lineare Algebra und analytische Geometrie. (German) [Linear algebra and analytic geometry] 91e:15001  
 Gordon, V. O. (with Ivanov, Yu. B.; Soltseva, T. E.) ★ Сборник задач по курсу начертательной геометрии. (Russian) [A collection of problems from a course in descriptive geometry] 91b:51038  
 Iacob, Calus ★ Matematică aplicată și mecanică. (Romanian) [Applied mathematics and mechanics] 91a:00001  
 Ivanov, Yu. B. *see* Gordon, V. O.; et al., 91b:51038  
 Kostov'ski, O. M. ★ Геометрические построения одним циркулем на плоскости и в пространстве. (Russian) [Geometric constructions with a compass on a plane and with only a spherograph in space] 91c:51033  
 Kostrikin, Aleksei Ivanovich (with Manin, Yu. I.) ★ Linear algebra and geometry. 91b:00008  
 Manin, Yu. I. *see* Kostrikin, Aleksei Ivanovich, 91b:00008  
 Postnikov, M. ★ Álgebra linear. (Portuguese) [Linear algebra] 91j:15002  
 Soltseva, T. E. *see* Gordon, V. O.; et al., 91b:51038

### 51-03 Historical (must also be assigned at least one classification number from Section 01)

- Deakin, Michael A. B. From Pappus to today. The history of a proof. (Not in MR)  
 Shenitzer, Abe The Cinderella career of projective geometry. 91m:51001

### Items with secondary classifications in 51-03

- (Beltrami, Eugenio) *see* Valabrega, Elda Gilbertella, 91c:01039  
 Benkő, Iosif *see* Sofonea, Liviu, 91k:53005  
 (Blanton, John D.) *see* Euler, Leonhard, 91b:01143  
 Brădeanu, Teodora Quelques aspects concernant le développement de la géométrie au temps de la Révolution française. [Some aspects of the development of geometry during the French Revolution] (see 91k:53005)  
 Burgin, M. S. (with Kuznetsov, V. I.) The model aspect of the evolution of geometry. (Russian) 91m:00003  
 Chera, Shiling Shen What is geometry? 91b:01003  
 Euler, Leonhard ★ Introduction to analysis of the infinite. Book II. 91b:01143  
 Herz-Fischler, Roger Dürer's paradox or why an ellipse is not egg-shaped. 91b:01017  
 (Klein, Felix) *see* Perović, Miodrag, 91j:01027  
 Kuznetsov, V. I. *see* Burgin, M. S., 91m:00003  
 Lachterman, David Rapport ★ The ethics of geometry. 91j:01003  
 Musavi, Bilquis Reformation of geometry. (Not in MR)  
 Ollerenshaw, Kathleen Some personal delights in geometry—from earliest days to fractals. (Not in MR)  
 Perović, Miodrag Felix Klein's Erlangen program and its influence on the development of mathematics. (Serbo-Croatian) 91j:01027  
 Prvanović, Mileva Discovery and development of non-Euclidean geometries. (Serbo-Croatian) 91j:01028  
 (Saccheri, G.) *see* Valabrega, Elda Gilbertella, 91c:01039  
 (Segre, Corrado) *see* Valabrega, Elda Gilbertella, 91c:01039  
 Sofonea, Liviu (with Benkő, Iosif) Die "Platonische Körper". Geometrische, physische, historische und epistemologische Aspekte. ["Platonic solids". Geometric, physical, historical and epistemological aspects] (see 91k:53005)  
 (Vallati, Giovanni) *see* Valabrega, Elda Gilbertella, 91c:01039  
 Valabrega, Elda Gilbertella The papers of Eugenio Beltrami, Corrado Segre and Giovanni Vallati on the "forgotten Saccheri". (Italian) 91c:01039

### 51-04 Explicit machine computation and programs (not the theory of computation or programming)

- Chou, Shang-Ching (with Gao, Xiao Shan) Ritt-Wu's decomposition algorithm and geometry theorem proving. (see 91g:68004)  
 Gao, Xiao Shan *see* Chou, Shang-Ching, 91g:68004  
 Wu, Wen Jun A report on mechanical theorem proving and mechanical theorem discovering in geometries. 91k:51002

### Items with secondary classifications in 51-04

- Cameron, Stephen (with Rossignac, Jaroslav R.) Relationship between S-bounds and active zones in constructive solid geometry. 91a:65064  
 Hickenbeck, Ulrich Euclidean geometry in terms of automata theory. 91c:68019  
 Rossignac, Jaroslav R. *see* Cameron, Stephen, 91a:65064

### 51-06 Proceedings, conferences, collections, etc.

- (Kantor, William M.) *see* Finite geometries, buildings, and related topics, 91c:51001  
 (Lieber, Robert A.) *see* Finite geometries, buildings, and related topics, 91c:51001  
 (Payne, Stanley E.) *see* Finite geometries, buildings, and related topics, 91c:51001  
 (Shult, Ernest E.) *see* Finite geometries, buildings, and related topics, 91c:51001

### Items listed otherwise than by author

- Conference:  
 Buildings and Related Geometries ★ Finite geometries, buildings, and related topics. 91c:51001  
 Finite geometries, buildings, and related topics ★ Finite geometries, buildings, and related topics. 91c:51001  
 Pingree Park, CO ★ Finite geometries, buildings, and related topics. 91c:51001

Items with secondary classifications in 51-06

- (Hofmann, Karl Heinrich) *see* Symmetry of discrete mathematical structures and their symmetry groups, 91m:00020  
 (Kramer, Karl S.) *see* Finite geometries and combinatorial designs, 91g:00042  
 (Magliveras, Spyros S.) *see* Finite geometries and combinatorial designs, 91g:00042  
 (Tarini, Marian) *see* Seminar: Geometry, 91k:53005  
 (Vasiu, Angela) *see* Seminar: Geometry, 91k:53005  
 (Wille, Rudolf) *see* Symmetry of discrete mathematical structures and their symmetry groups, 91m:00020

Items listed otherwise than by author

Contemporary Mathematics ★ Finite geometries and combinatorial designs. 91g:00042

Essays:

Symmetry of discrete mathematical structures and their symmetry groups ★ Symmetry of discrete mathematical structures and their symmetry groups. (German) 91m:00020  
 Finite geometries and combinatorial designs ★ Finite geometries and combinatorial designs. 91g:00042

Lincoln, NE ★ Finite geometries and combinatorial designs. 91g:00042

Seminar:

Geometry ★ Seminar on Geometry. 91k:53005

Session:

Finite Geometries and Combinatorial Designs ★ Finite geometries and combinatorial designs. 91g:00042

Symmetry of discrete mathematical structures and their symmetry groups ★ Symmetry of discrete mathematical structures and their symmetry groups. (German) 91m:00020

## 51Axx Linear incidence geometry

### 51A05 General theory and projective geometries

- Biondi, Paola On incidence structures defined by projective spaces. 91b:51001  
 Funk, Martin On the existence of little Desargues configurations in planes satisfying certain weak configurational conditions. 91c:51002  
 Kreuzer, Alexander Zur Konstruktion des Bündelraumes. (English summary) [On the construction of the bundle space] 91c:51003  
 Kuznetsova, V. A. (with Medvedeva, L. B.) A generalization of a theorem of Krupp. (Russian) 91j:51002  
 Li, Gui Lan (with Tian, Zhong Dong) Analysis of perspective structures of conic sections. (Chinese. English summary) 91j:51003  
 Medvedeva, L. B. *see* Kuznetsova, V. A., 91j:51002  
 Misra, Saroj Kanta *see* Sanyal, Arun, 91h:51001  
 Pambuccian, Victor Simple axiom systems for Euclidean geometry. 91j:51004  
 Sanyal, Arun (with Misra, Saroj Kanta) Collineation of period three and triply perspective triangles. 91h:51001  
 Tian, Zhong Dong *see* Li, Gui Lan, 91j:51003

Items with secondary classifications in 51A05

- Brill, Michael H. (with Stueben, Michael) Demystifying the projective plane. 91a:51008  
 Dress, Andreas W. M. (with Wenzel, Walter) On combinatorial and projective geometry. 91g:51006  
 Lo Re, Pia Maria *see* de Vito, Paola; et al., 91f:51021  
 Melone, Nicola *see* de Vito, Paola; et al., 91f:51021  
 Petukhov, S. V. Non-Euclidean geometries and algorithms of living bodies. 91c:92002  
 Stueben, Michael *see* Brill, Michael H., 91a:51008  
 de Vito, Paola (with Lo Re, Pia Maria; Melone, Nicola) Linear spaces on  $v$  points with  $v - 2$  mutually intersecting long lines. 91f:51021  
 Wenzel, Walter *see* Dress, Andreas W. M., 91g:51006

### 51A10 Homomorphism, automorphism and dualities

- (Cater, F. S.) *see* Witczyński, Krzysztof, 91g:51003  
 Il'yash, A. P. Projective planes with a group of collineations that is transitive on points lying outside the sides of a triangle. (Russian) 91d:51001  
 Rashid, Laila E. M. Collineations of polar spaces. 91h:51002  
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 Jeger, M. Über Dreiecks-Partitionen. [On triangle partitions] 91j:11085  
 Jordan, James H. Almost regular integer hexagons. 91i:51029  
 Killgrove, R. B. (with Koster, D. W.) Regular polygons with rational area or perimeter. (Not in MR)  
 Koster, D. W. *see* Killgrove, R. B., (Not in MR)  
 Lee, Shyh Nian (with Shih, Mou Hsiang) A volume problem for an  $n$ -dimensional ellipsoid intersecting with a hyperplane. 91d:52008  
 Molnár, Emil Projective metrics and hyperbolic volume. 91m:53011  
 Shih, Mou Hsiang *see* Lee, Shyh Nian, 91d:52008  
 Tamani, Italo (with Giacomelli, Corrado) Monotone approximation of sets of finite perimeter from inside. (Italian. English summary) 91j:49063  
 Velikova, Emiliya Angelova *see* Bilchev, Svetoslav I., 91f:51030  
 Zeng, Zhen Bing On a geometric inequality. 91k:51021  
 Zhou, Jia Nong Sufficient and necessary condition for a pseudosymmetric point set. (Chinese summary) 91a:52011

# 51M30 Line geometries and their generalizations [see also 53A25]



Items with secondary classifications in 51M30

Sachs, Hans ★ *Isotrope Geometrie des Raumes.* (German) [Isotropic geometry of space] 91g:51020

### 51M35 Synthetic treatment of fundamental manifolds in projective geometries (Grassmannians, Veronesians and their generalizations) [see also 14M15]

Buchic, Stanislaw Generalization of the Pascal theorem to the  $n$ -dimensional projective space. 91b:51035

Items with secondary classifications in 51M35

Apéry, François ★ *Models of the real projective plane.* 91a:57029 (Brieskorn, Egbert) see Apéry, François, 91a:57029

Misra, Saroj Kanta see Sanyal, Arun, 91h:51001

Sanyal, Arun (with Misra, Saroj Kanta) Collineation of period three and triply perspective triangles. 91h:51001

### 51M99 None of the above, but in this section

Items with secondary classifications in 51M99

Chou, Shang-Ching (with Yang, Jin Gen) On the algebraic formulation of certain geometry statements and mechanical geometry theorem proving. 91b:68101

Deng, Mi Ke see Zhang, Jing Zhong; et al., 91k:68168

Grinbaum, Branko (with Shephard, G. C.) Rotation and winding numbers for planar polygons and curves. 91b:52011

Okhanyan, V. K. On homogeneous processes of lines in the plane. (see 91j:60003)

Praeger, Cheryl E. Mathematics and weaving. II. Setting up the loom and factorizing matrices. 91b:65049

Schwarz, Binyamin (with Zaks, Abraham) Generalized contractions of the matrix unit disk. 91a:15012

Shephard, G. C. see Grinbaum, Branko, 91b:52011

Świerczkowski, S. Interpretations of Euclidean geometry. 91b:03098

Wright, J. D. Maitland Paradoxical decompositions of the cube and injectivity. 91f:46088

Yang, Jin Gen see Chou, Shang-Ching, 91b:68101

Yang, Lu see Zhang, Jing Zhong; et al., 91k:68168

Zaks, Abraham see Schwarz, Binyamin, 91a:15012

Zhang, Jing Zhong (with Yang, Lu; Deng, Mi Ke) The parallel numerical method of mechanical theorem proving. 91k:68168

### 51Nxx Analytic and descriptive geometry

#### 51N05 Descriptive geometry [see also 65D17, 68U07]

Ahlfeld, Uwe (with Hecker, Hans-Dietrich) Strenge Unimodalität und strenge Monotonie einfacher Polygone. [Strict unimodality and strict monotonicity of simple polygons] 91b:51036

Bohne, Erhart (with Möller, Reinhard) Zur Entwicklung der Beleuchtungsgeometrie (ein historischer Abriss). [On the development of illumination geometry (a historical sketch)] 91h:51037

Gordon, V. O. (with Ivanov, Yu. B.; Solntseva, T. E.) ★ Собрание задач по курсу начертательной геометрии. (Russian) [A collection of problems from a course in descriptive geometry] 91b:51038

Grochowski, Bogusław Central projection of a segment perpendicular to the given plane. 91c:51036

Hecker, Hans-Dietrich see Ahlfeld, Uwe, 91b:51036

Ivanov, Yu. B. see Gordon, V. O.; et al., 91b:51038

Jin, Ling see Wang, Wei, 91k:51023

Masuda, Shozo Tipped auxiliary and direct projection. 91f:51035

Möller, Reinhard see Bohne, Erhart, 91b:51037

Paukowitz, Peter Bemerkungen über isophengische Flächen und solche Flächen, die bezüglich zweier Beleuchtungen isophotisch sind. [Remarks on isophengic surfaces and such surfaces that are isophotisch with respect to two illuminations] 91f:51036

Solntseva, T. E. see Gordon, V. O.; et al., 91b:51038

Wang, Wei (with Jin, Ling) A topological transformation method and its applications. (Chinese. English summary) 91k:51023

Items with secondary classifications in 51N05

Ferro, Alfredo (with Gallo, Giovanni) Automated theorem proving in elementary geometry. 91j:68111

Gallo, Giovanni see Ferro, Alfredo, 91j:68111

Möller, André Geometrische Grundlagen der Rekonstruktion von Volumenmodellen aus Zeichnungsrisen. [Geometric foundations of the reconstruction of volume models from projections] (see 91k:65004)

Yang, Hai Yu see Ye, Bing Jun, 91d:65034

Ye, Bing Jun (with Yang, Hai Yu) A method for representing free-form surfaces. 91d:65034

#### 51N10 Affine analytic geometry

Brückmann, Peter (with Jarmer, Marion) Parabolische Bündel von Schrägspiegelungen an Ebenen im Äquiaffinen Raum. (English summary) [Parabolic bundles of skew reflections with respect to planes in equi-affine space] 91f:51031

Jarmer, Marion see Brückmann, Peter, 91f:51031

Klement, Heinz Zur Parallelität in Vektorräumen. [On parallelism in vector spaces] 91c:51037

Pottmann, Helmut (with Rath, Wolfgang) Eine affine kinematische Abbildung. II. (English and Serbo-Croatian summaries) [An affine kinematic mapping. II] 91e:51015

Pyasetkii, V. S. Two-orbit decompositions with respect to a triangular group of affine transformations. (Russian) 91h:51023

Rath, Wolfgang Eine affine kinematische Abbildung. I. (English and Serbo-Croatian summaries) [An affine kinematic mapping. I] 91e:51014

— see also Pottmann, Helmut, 91e:51015

Röschel, Otto Hyperoskulierende logarithmische Spiralen in affinen CK-Ebenen. (English summary) [Hyperosculating logarithmic spirals in affine CK-planes] 91h:51024

Vassallo, Salvatore Classification of 9-, 10- and 11-parameter subgroups of the group of affine transformations of space. (Italian. English summary) (see 91h:00025)

Items with secondary classifications in 51N10

Buchberger, B. (with Collins, G. E.; Kutzler, B.) Algebraic methods for geometric reasoning. 91g:68156

Collins, G. E. see Buchberger, B.; et al., 91g:68156

Kutzler, B. see Buchberger, B.; et al., 91g:68156

#### 51N15 Projective analytic geometry

Buchic, Stanislaw Der Pascals Lehrsatz im projektiven Raum  $P^3$ . (Polish summary) [Pascal's theorem in projective space  $P^3$ ] (Not in MR)

Kordos, Marek On the coexistence of various geometries. 91b:51039

Lü, Qing Hui The revision of Beskin's theorem. 91c:51038

Pickert, Günter Algebraisches zu dem Kegelschnittsatz von G. J. Rieger. [Algebraic remarks on G. J. Rieger's conic theorem] 91d:51022

(Rieger, Georg Johann) see Pickert, Günter, 91d:51022

Witezyński, Krzysztof Projectivity of a real projective line as a composition of cyclic projectivities. (Serbo-Croatian summary) 91h:51025

Ye, Tian Shun On the proof of Desargues' theorem in the plane. (Chinese) 91g:51019

Items with secondary classifications in 51N15

Heden, Olof No partial 1-spread of class  $[0, \geq 2]_q$  in  $PG(2d-1, q)$  exists. (Not in MR)

Ryan, Charles T. (with Ryan, Kevin M.) The minimum weight of the Grassmann codes  $C(k, n)$ . 91m:94027

Ryan, Kevin M. see Ryan, Charles T., 91m:94027

Vassallo, Salvatore The measurability of some families of cubics in the projective plane. (Italian. English summary) 91k:52010

#### 51N20 Euclidean analytic geometry

Bartocci, Umberto (with Pambianco, Fernanda) Estimating the volume of certain calottes. (Italian) 91b:51026

Bassegoda Nonell, D. Juan Line geometry and architecture. (Spanish. English and Catalan summaries) 91c:51039

Benz, Walter On weak dilatations. 91c:51040

Bohne, Erhart (with Knabe, Peter) Lichtstärke-Indikatoren für isophengische Flächenelemente mit Trägerpunkten auf ebenen glatten Kurven. [Luminance indicatrices for isophengic surface elements with carrier points on smooth plane curves] 91e:51016

Bushmelev, A. V. (with Sabitov, I. Kh.) Configuration spaces of Bricard octahedra. 91f:51032

Chen, Da Hui Two problems on confocal quadratic pencils of curves. (Chinese. English summary) 91d:51020

Czech, Ludmila Conic projection. (Polish. English and Russian summaries) 91a:51012

Dezoli, Lando On the intrinsic reference frame of a point transformation between two Euclidean spaces. (Italian) 91k:51024

— Identification of individual equations of inflexional lines in a Euclidean  $S_3$ . (Italian. English summary) 91k:51025

Eddy, R. H. Collineation induced incidence relations. 91j:51031

Gao, Bin Lin The drawing of four-flight magical stairs in frequently used normal dimetric axonometric projections. (Chinese. English summary) 91h:51027

Jonak, Marcin Paraboles d'un faisceau ponctuel de coniques. (Polish summary) [Parabolas of a pencil of conics] (Not in MR)

Knabe, Peter see Bohne, Erhart, 91e:51016

Lax, Peter D. The ergodic character of sequences of pedal triangles. 91h:51028

Lü, Qiang De A new graphic method of constructing an orthogonal axonometric system of coordinates by the use of axonometric parameters. (Chinese. English summary) (Not in MR)

Pambianco, Fernanda see Bartocci, Umberto, 91b:51026

Rieger, Georg Johann Addendum to my paper: "On plane sections of cones" [Math. Semesterber. 35 (1988), no. 2, 263–270; MR 89i:51028]. (German) 91d:51021

Rüdiger, Karlheinz Zweiparametrische Geradenfamilien im  $R^3$ . [Two-parameter families of straight lines in  $R^3$ ] 91d:51023

Sabitov, I. Kh. see Bushmelev, A. V., 91f:51032

Stammiller, Ludwig Optimierung konstant belegter Ovale und ein Hyperbel-Schnittsatz. [Optimization of constantly endowed ovals and a hyperbola intersection theorem] 91d:51024

Su, Hua Ming Two inequalities concerning tangent-point simplexes. (Chinese. English summary) 91h:51029

Items with secondary classifications in 51N20

Boehm, Wolfgang Some remarks on cyclides in solid modeling. 91b:65020

Day, William Alan Inequalities for areas associated with conics. (Not in MR)

Eriksson, Folke On the measure of solid angles. 91c:51035

Geise, G. (with Langbecker, U.) Finite quadric segments with four conic boundary curves. 91m:65044

Goldfman, Mikhail Abramovich A problem on three orthogonal projections of an angle. (Russian) 91d:51018

Hoskins, Janet A. (with Hoskins, William D.; Stanton, Ralph G.) A generalization of the circumcircle theorem. 91c:51028

- Hoskins, William D. *see* Hoskins, Janet A.; et al., 91c:51028  
 Hunt, K. H. ★ Kinematic geometry of mechanisms. 91e:70005  
 Ignatenko, V. F. Special algebraic surfaces with an infinite set of planes of oblique symmetry. 91i:51020  
 Kern, Hans (with Rung, Josef) Ein Weg zu den rationalen Punkten auf der Kugel oder: Wozu die komplexen Zahlen auch gut sind. [An approach to the rational points on the sphere, or: Another thing complex numbers are good for] 91a:11002  
 Kirsch, Arnold Comment on: "Snowflake curve and recursion" [Praxis Math. 30 (1988), no. 8, 449-454; MR 91a:26005a] by K. Rüdiger. (German) 91g:26010  
 Langbecker, U. *see* Geise, G., 91m:65044  
 Martini, Horst A contribution to the light field theory. 91f:52003  
 Paasche, I. *see* Kern, Hans, 91a:11002  
 Pickert, Günter Algebraisches zu dem Kegelschnittsatz von G. J. Rieger. [Algebraic remarks on G. J. Rieger's conic theorem] 91d:51022  
 Pratt, M. J. Cyclide blending in solid modelling. 91b:65019  
 (Rieger, Georg Johann) *see* Pickert, Günter, 91d:51022  
 (Rüdiger, Karlheinz) *see* Kirsch, Arnold, 91g:26010  
 Rung, Josef *see* Kern, Hans, 91a:11002  
 Stamou, Georg Über die isotropen Geradenkongruenzen im einfach isotropen Raum. [On isotropic line congruences in the simply isotropic space] 91e:53023  
 Stanton, Ralph G. *see* Hoskins, Janet A.; et al., 91c:51028  
 Yu, Yan Lin Trigonometry. II. 91e:53024

## 51N25 Analytic geometry with other transformation groups

- Gromov, N. A. Transitions: contractions and analytical continuations of the Cayley-Klein groups. 91e:51017  
 Sachs, Hans Parabolische Schiebzyklen des einfach isotropen Raumes. [Parabolic translation cyclides of the simply isotropic space] 91b:51040  
 — Verallgemeinerte parabolische Schiebzyklen des einfach isotropen Raumes  $I_1^{(1)}$ . [Generalized parabolic translation cyclides of the simply isotropic space  $I_1^{(1)}$ ] 91f:51037  
 — ★ Isotrope Geometrie des Raumes. (German) [Isotropic geometry of space] 91g:51020  
 Vogler, Hans (with Wresnik, Helmut) ★ Endlichdimensionale isotrope Räume  $I_k^2$  vom Isotropiegrad  $k$ . (German) [Finite-dimensional isotropic spaces  $I_k^2$  of isotropy degree  $k$ ] 91d:51025  
 Wresnik, Helmut *see* Vogler, Hans, 91d:51025

Items with secondary classifications in 51N25

- Husty, M. (with Sachs, Hans) Eine geometrische Deutung der eingliedigen Untergruppen der allgemeinen ebenen isotropen Ähnlichkeitsgruppe. (English summary) [A geometric interpretation of the one-parameter subgroups of the general plane isotropic similarity group] 91j:53010  
 Sachs, Hans Zur Theorie der Zykliken des einfach isotropen Raumes  $I_1^{(1)}$ . (English and Serbo-Croatian summaries) [On the theory of cyclides of the simply isotropic space  $I_1^{(1)}$ ] 91i:53029  
 — *see also* Husty, M., 91j:53010  
 Shuker, N. H. Commutativity of compounded symmetric two-two correspondences. (Arabic summary) 91i:14041  
 Yu, Yan Lin Trigonometry. II. 91e:53024

## 51N30 Geometry of classical groups [see also 20Gxx, 14L35]

Items with secondary classifications in 51N30

- Kantor, William M. (with Meixner, Thomas; Wester, M.) Two exceptional 3-adic affine buildings. 91d:20050  
 Meixner, Thomas *see* Kantor, William M.; et al., 91d:20050  
 Wester, M. *see* Kantor, William M.; et al., 91d:20050

## 51N35 Questions of classical algebraic geometry [see also 14Nxx]

Items with secondary classifications in 51N35

- Degoll, Lando Sur les fagots, les contrefagots, les dèter-cubes et leurs applications. [On bundles, counterbundles, deter-cubes and their applications] 91b:14071

## 51P05 Geometry and physics (should also be assigned at least one other classification number from Sections 70-86)

Items with secondary classifications in 51P05

- Krantz, David M. *see* Suppes, Patrick; et al., 91g:00022  
 Luce, R. Duncan *see* Suppes, Patrick; et al., 91g:00022  
 Suppes, Patrick (with Krantz, David M.; Luce, R. Duncan; Tversky, Amos) ★ Foundations of measurement. Vol. II. 91g:00022  
 Tversky, Amos *see* Suppes, Patrick; et al., 91g:00022

## 52-XX Convex and discrete geometry

### 52-01 Instructional exposition (textbooks, tutorial papers, etc.)

Berger, Marcel Convexity. 91f:52001

Items with secondary classifications in 52-01

- (Ahlfeld, Uwe) *see* Shashkin, Yu. A., 91c:52015  
 (Fischer, M.) *see* Shashkin, Yu. A., 91c:52015  
 (Hecker, Hans-Dietrich) *see* Shashkin, Yu. A., 91c:52015  
 (Herwig, Dietmar) *see* Shashkin, Yu. A., 91c:52015  
 (Möller, Reinhard) *see* Shashkin, Yu. A., 91c:52015  
 (Probst, E.) *see* Shashkin, Yu. A., 91c:52015  
 Shashkin, Yu. A. ★ Ecken, Flächen, Kanten. (German) [Vertices, surfaces, edges] 91c:52015

### 52-02 Research exposition (monographs, survey articles)

Vershik, A. M. Topological problems in combinatorial and convex geometry and the theory of representations of partially ordered sets. (Russian) 91j:52001

Items with secondary classifications in 52-02

- Berger, Marcel Convexity. 91f:52001  
 Mitrović, Dragoslav S. (with Pečarić, Josip E.; Volenec, Vladimir) ★ Recent advances in geometric inequalities. 91k:52014  
 Pečarić, Josip E. *see* Mitrović, Dragoslav S.; et al., 91k:52014  
 Volenec, Vladimir *see* Mitrović, Dragoslav S.; et al., 91k:52014  
 Zamfirescu, Tudor Porosity in convexity. 91e:52002

### 52-03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 52-03

- Loeb, A. L. The magic of the pentangle: dynamic symmetry from Merlin to Penrose. 91a:01058a

### 52-04 Explicit machine computation and programs (not the theory of computation or programming)

Items with secondary classifications in 52-04

- Aggarwal, Alok (with Booth, Heather; O'Rourke, Joseph; Suri, Subhash; Yap, Chee-Keng) Finding minimal convex nested polygons. 91a:68258  
 — (with Hawrylycz, Michael) On computing the closest boundary point on the convex hull. 91a:68257  
 Atallah, Mikhail J. (with Chen, Danny Z.) An optimal parallel algorithm for the minimum circle-cover problem. 91a:68259  
 Booth, Heather *see* Aggarwal, Alok; et al., 91a:68258  
 Chen, Danny Z. *see* Atallah, Mikhail J., 91a:68259  
 Cole, Richard (with Salowe, Jeffrey S.; Steiger, W. L.; Szemerédi, Endre) An optimal-time algorithm for slope selection. 91a:68124  
 Edelsbrunner, Herbert (with Guibas, Leonidas J.; Hershberger, John; Pach, János; Pollack, Richard M.; Seidel, Raimund; Sharir, Micha; Snoeyink, Jack) On arrangements of Jordan arcs with three intersections per pair. 91a:68265  
 Egecioglu, Ömer (with Kalantari, Bahman) Approximating the diameter of a set of points in the Euclidean space. 91b:68114  
 Emswamy-K., M. R. (with Lazarte, L.) On the cut-complexes of the 5-cube. 91e:52005  
 Frederickson, Greg N. (with Rodger, Susan) A new approach to the dynamic maintenance of maximal points in a plane. 91b:68115  
 Guibas, Leonidas J. (with Sharir, Micha; Sifrony, Shmuel) On the general motion-planning problem with two degrees of freedom. 91a:68268  
 — *see also* Edelsbrunner, Herbert; et al., 91a:68265  
 Hawrylycz, Michael *see* Aggarwal, Alok, 91a:68257  
 Hershberger, John *see* Edelsbrunner, Herbert; et al., 91a:68265  
 Kalantari, Bahman *see* Egecioglu, Ömer, 91b:68114  
 Lazarte, L. *see* Emswamy-K., M. R., 91e:52005  
 Motwani, Rajeev (with Raghunathan, Arvind; Saran, Huzur) Perfect graphs and orthogonally convex covers. 91a:68270  
 O'Rourke, Joseph *see* Aggarwal, Alok; et al., 91a:68258  
 Pach, János *see* Edelsbrunner, Herbert; et al., 91a:68265  
 Pollack, Richard M. *see* Edelsbrunner, Herbert; et al., 91a:68265  
 Raghunathan, Arvind *see* Motwani, Rajeev; et al., 91a:68270  
 Rodger, Susan *see* Frederickson, Greg N., 91b:68115  
 Salowe, Jeffrey S. *see* Cole, Richard; et al., 91a:68124  
 Saran, Huzur *see* Motwani, Rajeev; et al., 91a:68270  
 Seidel, Raimund *see* Edelsbrunner, Herbert; et al., 91a:68265  
 Sharir, Micha *see* Edelsbrunner, Herbert; et al., 91a:68265 and Guibas, Leonidas J.; et al., 91a:68268  
 Sifrony, Shmuel *see* Guibas, Leonidas J.; et al., 91a:68268  
 Snoeyink, Jack *see* Edelsbrunner, Herbert; et al., 91a:68265  
 Steiger, W. L. *see* Cole, Richard; et al., 91a:68124  
 Suri, Subhash Computing geodesic furthest neighbors in simple polygons. 91b:68117  
 — *see also* Aggarwal, Alok; et al., 91a:68258  
 Szemerédi, Endre *see* Cole, Richard; et al., 91a:68124  
 Yap, Chee-Keng *see* Aggarwal, Alok; et al., 91a:68258

### 52-06 Proceedings, conferences, collections, etc.

(Avis, David) *see* Conference: Computational Geometry, 91m:52001

Items listed otherwise than by author

#### Conference:

Computational Geometry ★ First Canadian Conference on Computational Geometry.

91m:52001

Montreal, PQ ★ First Canadian Conference on Computational Geometry. 91m:52001

Items with secondary classifications in 52-06

(Hofmann, Karl Heinrich) *see* Symmetry of discrete mathematical structures and their symmetry groups, 91m:00020

(Sharir, Micha) *see* ACM Symposium: Computational Geometry, 91e:68002

(Wille, Rudolf) *see* Symmetry of discrete mathematical structures and their symmetry groups, 91m:00020

Items listed otherwise than by author

#### ACM Symposium:

Computational Geometry ★ ACM Symposium on Computational Geometry. 91e:68002

#### Essays:

Symmetry of discrete mathematical structures and their symmetry groups ★ Symmetry of discrete mathematical structures and their symmetry groups. (German) 91m:00020

Saarbrücken ★ ACM Symposium on Computational Geometry. 91e:68002

Symmetry of discrete mathematical structures and their symmetry groups ★ Symmetry of discrete mathematical structures and their symmetry groups. (German) 91m:00020

## 52Axx General convexity

### 52A01 Axiomatic and generalized convexity

Kolodziejczyk, Krzysztof (with Sierksma, Gerard) The semirank and Eckhoff's conjecture for Radon numbers. 91k:52001

Sierksma, Gerard *see* Kolodziejczyk, Krzysztof, 91k:52001

Items with secondary classifications in 52A01

Akdoğan, S. Triangular convexity. (Turkish summary) 91i:52002

Edelman, Paul H. (with Larman, David G.) On characterizing collections arising from  $n$ -gons in the plane. 91b:52003

Kryński, Stanisław A characterization of discrete topological spaces as convexity spaces. 91h:54001

Larman, David G. *see* Edelman, Paul H., 91b:52003

Massouros, Ch. G. Hypergroups and convexity. 91h:20096

Mikrityan, G. A. *see* Zelinskii, Yu. B., 91j:52004

Pasicki, Lech Applications of weeds. (Polish summary) 91k:54034

Prisakar, A. V. *see* Topali, O. I., 91k:52002

Topali, O. I. (with Prisakar, A. V.) The union of convex sets, and metric kernels. (Russian) 91k:52002

van de Vel, M. Invariant arcs, Whitney levels, and Kelley continua. 91k:54067

Zelinskii, Yu. B. (with Mikrityan, G. A.) On extreme points and hypercomplex-convex domains. 91j:52004

### 52A05 Convex sets without dimension restrictions

Andalafte, Edward Z. *see* Freese, Raymond W., et al., 91b:52001

Cao, Bing Yuan Extension convex sets. (Chinese, English summary) 91d:52001

Freese, Raymond W. (with Murphy, Gratian; Andalafte, Edward Z.) Strict convexity in  $M$ -spaces. 91b:52001

Murphy, Gratian *see* Freese, Raymond W., et al., 91b:52001

Noll, Dominikus A topological completeness concept with applications to the open mapping theorem and the separation of convex sets. 91b:52002

Prisakar, A. V. *see* Topali, O. I., 91k:52002

Topali, O. I. (with Prisakar, A. V.) The union of convex sets, and metric kernels. (Russian) 91k:52002

Items with secondary classifications in 52A05

Park, Sehie Convex spaces and KKM families of subsets. 91h:54065

Penot, Jean-Paul The cosmic Hausdorff topology, the bounded Hausdorff topology and continuity of polarity. 91k:54012

### 52A07 Convex sets in topological vector spaces [see also 46A55]

Park, Sehie Generalized matching theorems for closed coverings of convex sets. 91h:52001

Items with secondary classifications in 52A07

Becker, Richard Edouard Sur les cônes faiblement complets, contenus dans un espace de Banach. [On weakly complete cones contained in a Banach space [Math. Ann. 285 (1989), no. 1, 99-103; MR 90k:46043]] *see* 91m:46002

Chang, Hsiu Yü A generalization of KKM principle and its applications. 91a:54025

Dalla, Leon On a class of some special sets on the  $k$ -skeleton of a convex compact set. 91a:52003

Gao, Ji (with Lau, Ka-Sing) On the geometry of spheres in normed linear spaces. 91e:46025

Isac, G. (with Németh, A. B.) Every generating isotone projection cone is latticial and correct. 91k:46006

Kutzarova, D. N. A nearly uniformly convex space which is not a  $(\beta)$ -space. 91d:46014

Lau, Ka-Sing *see* Gao, Ji, 91e:46025

Németh, A. B. *see* Isac, G., 91k:46006

Nielsen, Mark J. Singular points of a star-finite tiling. 91h:52015

Pisier, Gilles ★ The volume of convex bodies and Banach space geometry. 91d:52005

Pontari, Costante Inclusion theorems for nonexplosive and strongly exposed cones in normed spaces. 91e:90097

Tarafdar, E. A theorem concerning sets with convex sections. 91a:47061

Venturini, Sergio Intrinsic metrics in complete circular domains. 91m:32025

### 52A10 Convex sets in 2 dimensions (including convex curves) [see also 53A04]

Bianchi, Gabriele (with Volčič, Aljola) Hammer's X-ray problem is well-posed. (Italian summary) 91d:52002

Boman, Jan The sum of two plane convex  $C^\infty$  sets is not always  $C^3$ . 91j:52002

Böröczky, K., Jr. Rectangular convexity of convex domains of constant width. 91e:52001

Edelman, Paul H. (with Larman, David G.) On characterizing collections arising from  $n$ -gons in the plane. 91b:52003

Edelsbrunner, Herbert (with Robison, Arch D.; Shen, Xiao Jun) Covering convex sets with nonoverlapping polygons. 91i:52001

Kós, Géza (with Töröcsik, Jenő) Convex disks can cover their shadow. 91k:52003

Larman, David G. *see* Edelman, Paul H., 91b:52003

Lassak, Marek Approximation of plane convex bodies by centrally symmetric bodies. 91a:52001

Michelacci, G. On a partial extension of a theorem of Falconer. 91f:52002

— (with Volčič, Aljola) A better bound for the excentricities not admitting the equichordal body. 91m:52002

Robison, Arch D. *see* Edelsbrunner, Herbert; et al., 91i:52001

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### 52A15 Convex sets in 3 dimensions (including convex surfaces) [see also 53A05, 53C45]

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Bohne, Erhart (with Soltan, P. S.) External illumination of a two-sided cone. (Russian) 91h:52004

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Montejano, Luis About a problem of Ulam concerning flat sections of manifolds. 91h:57007

Sung, Chen Han (with Tan, Pi Hsin) A study of projectionally exposed cones. 91j:52008

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## 52A21 Finite-dimensional Banach spaces (including special norms, zonoids, etc.) [see also 46Bxx]

Banaszczyk, Wojciech A Beck-Fiala-type theorem for Euclidean norms. 91k:52008

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## 52A22 Random convex sets and integral geometry [see also 53C65, 60D05]

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Goodey, Paul (with Howard, Ralph) Processes of flats induced by higher-dimensional processes. 91d:60025

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Rosen, Dennis Coverage of a square lattice by an inclined rectangle. 91h:60013

Santaló, Luis A. Random mosaics. (Spanish) 91d:60029

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Whittaker, Joe Random triangles. 91i:60038

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## 52A25 Polyhedra and polytopes (1985)

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## 52A27 Approximation by convex sets

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Akdogan, S. Triangular convexity. (Turkish summary) 91i:52002

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— (with Katchalski, Meir; Pulleyblank, William R.) The maximum size of a convex polygon in a restricted set of points in the plane. 91a:52006

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 Palásti, Ilona On some distance properties of sets of points in general position in space. 91f:52006  
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 Vrećica, Sinika T. *see* Živaljević, Rade T., 91j:52006  
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 Golberg, A. I. (with Gurvich, V. A.) A problem in the theory of extremal graphs and its application. 91c:05102  
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 Skiena, Steven S. Counting  $k$ -projections of a point set. 91b:05013  
 Tootyan, B. E. On the number of  $(F)$ -separable subsets in finite sets. (Russian. Armenian summary) 91g:05004  
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#### 52A38 Length, area, volume [see also 26B15, 28A75, 49Q20]

- Bárány, Imre Intrinsic volumes and  $f$ -vectors of random polytopes. 91c:52008  
 Budach, Lothar Lipschitz-Killing curvatures of angular partially ordered sets. 91c:52007  
 Chal, Y. D. An estimate of the volume of a compact set in terms of its integral of mean curvature. 91g:52004  
 Dębicki, W. The additivity of the volume and Sperner's lemma. 91j:52007  
 Kellerhals, Ruth On the volume of hyperbolic polyhedra. 91e:52008  
 Khachiyan, L. G. An inequality for the volume of inscribed ellipsoids. 91b:52006  
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 — *see also* Schlitt, Carsten, 91f:52005

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- Alsina, Claudi (with Llibre, Jaume) On the length, area and volume of lattice figures. (Serbo-Croatian summary) 91f:52028  
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 Fejes Tóth, G. (with Gritzmann, P.; Wills, Jörg M.) On finite multiple packings. 91f:52012  
 Fillman, P. Exterior algebra and projections of polytopes. 91f:52015  
 Frankl, Peter (with Maehara, Hiroshi) Simplices with given 2-face areas. 91e:52006  
 Góldz, Stanisław On curves with a constant perimeter of the described polygon lines. 91f:53001  
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 Tanno, Shokichi Integrals of some trigonometric functions. 91g:33002

Wills, Jörg M. *see* Fejes Tóth, G.; et al., 91f:52012

#### 52A39 Mixed volumes and related topics

- Diskant, V. I. Refinements of an isoperimetric inequality and stability theorems in the theory of convex bodies. (Russian) 91c:52009  
 Groemer, H. On an inequality of Minkowski for mixed volumes. 91b:52007  
 Ivchikina, N. M. Mixed volumes and connected variational problems. 91f:52011  
 Lutwak, Erwin On quermassintegrals of mixed projection bodies. 91b:52008  
 Schneider, Rolf On the Aleksandrov-Fenchel inequality for convex bodies. I. 91b:52009  
 Wills, Jörg M. Minkowski's successive minima and the zeros of a convexity-function. 91f:52012

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#### 52A40 Inequalities and extremum problems

- Alsina, Claudi (with García Roig, J.-L.) On proportion functions of convex domains. 91e:52010  
 Banaszczyk, Wojciech A note on the Steinitz constant of the Euclidean plane. 91g:52005  
 Benedetti, Riccardo (with Dedò, Maria) Global inequalities for curves and surfaces in three-space. 91e:52011  
 Bobek, Leo Eine Verschärfung isoperimetrischer Ungleichungen für Kurven und Polygone. (Russian and Czech summaries) [A strengthening of isoperimetric inequalities for curves and polygons] 91c:52010  
 Chukhrov, I. P. Maximal cardinality of the shadow of an antichain. (Russian) 91e:52012  
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 Groemer, H. Stability properties of geometric inequalities. 91a:52008  
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 Kertész, G. A counterexample to an isoperimetric problem of L. Fejes Tóth. 91f:52013  
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- Alon, Noga (with Katchalski, Meir; Pulleyblank, William R.) Cutting disjoint disks by straight lines. 91a:52005  
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 Auchmuty, Giles Variational principles for variational inequalities. 91b:49010  
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 Chal, Y. D. An estimate of the volume of a compact set in terms of its integral of mean curvature. 91g:52004  
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 Klötzler, Rolf *see* Hartwig, Helga, 91h:49042  
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 Lutwak, Erwin On quermassintegrals of mixed projection bodies. 91b:52008  
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- Naveira, Antonio M. (with Segura, Salvador) Some remarks about the isoperimetric problem. 91a:53066
- Pulleyblank, William R. see Alon, Noga; et al., 91a:52005 and 91a:52006
- Schneider, Rolf On the Aleksandrov-Fenchel inequality for convex bodies. I. 91b:52009
- Segura, Salvador see Naveira, Antonio M., 91a:53066 and Montesinos Amilibia, A., 91c:52009
- Shor, N. Z. (with Berezovskii, O. A.) The use of an algorithm of subgradient type with space dilatation for constructing an ellipsoid of maximum volume inscribed in a polyhedron. (Russian. English summary) 91a:90151
- Willis, Jörg M. Minkowski's successive minima and the zeros of a convexity-function. 91f:52012

## 52A41 Convex functions and convex programs [see also 26B25, 90C25]

- Cong, Wen Xiang (with He, Yuan Kui) An extension of a theorem in convex analysis. (Chinese. English summary) 91b:52010
- Dinh Thé Lạc Continuity properties of cone-convex functions. 91m:52007
- He, Yuan Kui see Cong, Wen Xiang, 91b:52010
- Sokirka, A. I. (with Soltan, Valeriu P.) d-convex functions on graphs. (Russian) 91i:52007
- Soltan, Valeriu P. see Sokirka, A. I., 91i:52007
- Sung, Chen Han (with Tan, Pi Hsin) A study of projectively exposed cones. 91j:52008
- Tan, Pi Hsin see Sung, Chen Han, 91j:52008

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- Avis, David (with Doskas, Mike) Algorithms for high-dimensional stabbing problems. 91d:68119
- Beer, Gerald A. Three characterizations of the Mosco topology for convex functions. 91k:49013
- Doskas, Mike see Avis, David, 91d:68119
- Eaves, B. Curtis Deforming subdivisions. 91i:90070
- Emelichev, V. A. (with Koval'ev, M. M.; Ramazanov, A. B.) The error of gradient extrema of the strongly convex function of a discrete argument. (Russian) 91h:90071
- Flåm, Sjur D. (with Zowe, Jochem) Relaxed outer projections, weighted averages and convex feasibility. 91e:65074
- Kannan, Ravindran (with Lovász, László; Scarf, Herbert E.) The shapes of polyhedra. 91d:52004
- Koval'ev, M. M. see Emelichev, V. A.; et al., 91h:90071
- Lovász, László see Kannan, Ravindran; et al., 91d:52004
- Noll, Dominikus A topological completeness concept with applications to the open mapping theorem and the separation of convex sets. 91b:52002
- Ramazanov, A. B. see Emelichev, V. A.; et al., 91h:90071
- Rohn, Jiri On nonconvexity of the solution set of a system of linear interval equations. 91e:65066
- Scarf, Herbert E. see Kannan, Ravindran; et al., 91d:52004
- Sterna-Karwat, Alicia Approximating families of cones and proper efficiency in vector optimization. 91j:90067
- Thierfelder, J. Trennungsaussagen und Pareto-Optimalität. [Separation theorems and Pareto optimality] 91i:90051
- Zowe, Jochem see Flåm, Sjur D., 91e:65074

## 52A45 Packing, covering, tiling [see also 05B40, 05B45, 11H31, 51-XX] (1985)

- Katz, André Some local properties of the three-dimensional Penrose tilings. (see 91a:52030)
- Penrose, Roger Tilings and quasicrystals: a nonlocal growth problem? (see 91a:52030)
- Senéchal, Marjorie A brief introduction to tilings. (see 91a:52030)

Items with secondary classifications in 52A45

- Bohsung, J. (with Trebin, Hans-Rainer) Defects in quasicrystals. (see 91a:52030)
- Haase, R. W. see Kramer, Peter, (91a:52030)
- Kramer, Peter (with Haase, R. W.) Group theory of icosahedral quasicrystals. (see 91a:52030)
- Trebin, Hans-Rainer see Bohsung, J., (91a:52030)

## 52A55 Spherical and hyperbolic convexity

- Florian, August Approximation of spherical caps by polygons. 91a:52012
- Horváth, Jenő Distribution of hyperplanes in an  $n$ -dimensional hyperbolic space. (Russian) 91b:52004

Items with secondary classifications in 52A55

- Kellerhals, Ruth On the volume of hyperbolic polyhedra. 91e:52008
- Molnár, Emil Eine Klasse von hyperbolischen Raumgruppen. [A class of hyperbolic space groups] 91m:51014

## 52A99 None of the above, but in this section

- Grünbaum, Branko (with Shephard, G. C.) Rotation and winding numbers for planar polygons and curves. 91b:52011
- Shephard, G. C. see Grünbaum, Branko, 91b:52011
- Wegner, Bernd On the rectangle property for plane continua and immersed topological hypersurfaces. 91a:52013
- Transnormality and the infinitesimal rectangle property. 91a:52014

Items with secondary classifications in 52A99

- Diamond, Phil (with Kloeden, Peter E.) Metric spaces of fuzzy sets. 91f:54004
- Kloeden, Peter E. see Diamond, Phil, 91f:54004
- Mejřtro, Leif Vitali systems of neighbouring type. 91m:28002

## 52Bxx Polytopes and polyhedra

Items with secondary classifications in 52Bxx

- Vershik, A. M. Topological problems in combinatorial and convex geometry and the theory of representations of partially ordered sets. (Russian) 91j:52001

## 52B05 Combinatorial properties (number of faces, shortest paths, etc.) [see also 05Cxx]

- (Ahlfeld, Uwe) see Shashkin, Yu. A., 91c:52015
- Bezdek, András (with Bezdek, Károly; Makai, Endre, Jr.; McMullen, Peter) Facets with fewest vertices. 91c:52014
- Bezdek, Károly (with Bisztriczky, T.; Connelly, R.) On hyperplanes and polytopes. 91c:52015
- see also Bezdek, András; et al., 91c:52014
- Bisztriczky, T. see Bezdek, Károly; et al., 91c:52015
- Connelly, R. see Bezdek, Károly; et al., 91c:52015
- (Fischer, M.) see Shashkin, Yu. A., 91c:52015
- (Hecker, Hans-Dietrich) see Shashkin, Yu. A., 91c:52015
- (Herwig, Dietmar) see Shashkin, Yu. A., 91c:52015
- Makai, Endre, Jr. see Bezdek, András; et al., 91c:52014
- McMullen, Peter see Bezdek, András; et al., 91c:52014
- (Möller, Reinhard) see Shashkin, Yu. A., 91c:52015
- (Probst, E.) see Shashkin, Yu. A., 91c:52015
- Schattenman, A. A four-vertex theorem for polygons and its generalization to polytopes. 91c:52016
- Shashkin, Yu. A. ★ Ecken, Flächen, Kanten. (German) [Vertices, surfaces, edges] 91c:52015

Items with secondary classifications in 52B05

- De Simone, Caterina The cut polytope and the Boolean quadric polytope. 91e:52017
- Dwyer, Rex A. Random convex hulls in a product of balls. 91k:60018
- Jendroff, Stanislav (with Jucović, Ernest) On quadrangular convex 3-polytopes with at most two types of edges. 91c:52016
- Jucović, Ernest see Jendroff, Stanislav, 91c:52016
- McMullen, Peter (with Schulte, Egon) Constructions for regular polytopes. 91c:52017
- Schulte, Egon see McMullen, Peter, 91c:52017

## 52B10 Three-dimensional polytopes

- Baranowski, Jan Structures des zéolites. [Structures of zeolites] (Not in MR)
- Chepoi, V. D. see Soltan, P. S.; et al., 91k:52016
- Jendroff, Stanislav (with Jucović, Ernest) On quadrangular convex 3-polytopes with at most two types of edges. 91c:52016
- (with Tkáč, Michal) Convex 3-polytopes with exactly two types of edges. 91k:52015
- Jucović, Ernest see Jendroff, Stanislav, 91c:52016
- Prisakar, A. V. see Soltan, P. S.; et al., 91k:52016
- Smilansky, Zeev A nongometric shelling of a 3-polytope. 91j:52009
- Soltan, P. S. (with Prisakar, A. V.; Chepoi, V. D.) Partitioning of a polyhedron into parallelepipeds. (Russian. English summary) 91k:52016
- Tkáč, Michal see Jendroff, Stanislav, 91k:52015

Items with secondary classifications in 52B10

- Karkazis, John Locating obnoxious materials in a building. (see 91f:90005)
- Kellerhals, Ruth On the volume of hyperbolic polyhedra. 91e:52008
- Reuter, K. K. On the order dimension of convex polytopes. 91a:52015

## 52B11 $n$ -dimensional polytopes

- Balazse, É. D. On a generalization of zonohedra. (Russian. English and Georgian summaries) 91f:52014
- Bokowski, Jürgen (with Guedes de Oliveira, António) Simplicial convex 4-polytopes do not have the isotopy property. 91k:52017
- Filliman, P. Exterior algebra and projections of polytopes. 91f:52015
- Guedes de Oliveira, António see Bokowski, Jürgen, 91k:52017
- Lee, Jon<sup>2</sup> Canonical equation sets for classes of concordant polytopes. 91j:52010
- A spectral approach to polyhedral dimension. 91j:52011
- Makai, Endre, Jr. (with Martini, Horst) A lower bound on the number of sharp shadow-boundaries of convex polytopes. 91h:52005
- Martini, Horst Convex polytopes whose projection bodies and difference sets are polars. 91k:52018
- see also Makai, Endre, Jr., 91h:52005
- Martinov, Nikola I. Parallelohedra and polygons. (Bulgarian. English and Russian summaries) 91j:52012
- Pokrovskii, V. G. Sections of  $n$ -dimensional polyhedra and the Zylev-Debrunner theorem. (Russian) 91k:52019
- Zaks, Joseph No nine neighborly tetrahedra exist. 91k:52020

Items with secondary classifications in 52B11

- Bayer, Margaret M. (with Klapper, Andrew) A new index for polytopes. 91k:52024
- Klapper, Andrew see Bayer, Margaret M., 91k:52024
- Kramer, Peter (with Schlottmann, M.) Dualisation of Voronoi domains and Klotz construction: a general method for the generation of proper space fillings. 91g:52012
- Martini, Horst (with Nguyễn Mạnh Hùng; Soltan, Valeriu P.) On Eggleston's theorem about affine diameters. 91g:52002
- Nguyễn Mạnh Hùng see Martini, Horst; et al., 91g:52002
- Schlottmann, M. see Kramer, Peter, 91g:52012
- Soltan, Valeriu P. see Martini, Horst; et al., 91g:52002



## 52B12 Special polytopes (linear programming, centrally symmetric, etc.)

- De Simone, Caterina The cut polytope and the Boolean quadric polytope. 91e:52017  
 Faigle, Ulrich *see* Von Arnim, Annette; et al., 91g:52007  
 Lee, Jon<sup>2</sup> Characterizations of the dimension for classes of concordant polytopes. 91e:52018  
 Makeev, V. V. Universal coverings and projections of bodies of constant width. (Russian) 91e:52019  
 Nobili, P. (with Sassano, A.) Composition operations for clutters and related polyhedra. 91e:52016  
 Sassano, A. *see* Nobili, P., 91e:52016  
 Schrader, Rainer *see* Von Arnim, Annette; et al., 91g:52007  
 Smilansky, Zeev Bi-cyclic 4-polytopes. 91f:52017  
 Von Arnim, Annette (with Faigle, Ulrich; Schrader, Rainer) The permutahedron of series-parallel posets. 91g:52007  
 Weiss, Asia Ivić Some infinite families of finite incidence-polytopes. 91f:52018

### Items with secondary classifications in 52B12

- Bayer, Margaret M. (with Sturmfels, Bernd) Lawrence polytopes. 91e:52023  
 Blair, Charles Representation for multiple right-hand sides. 91h:90059  
 Chernyakov, A. G. *see* Vershik, A. M., (91h:00023)  
 Fujishige, Satoru (with Zhan, Ping) A dual algorithm for finding the minimum-norm point in a polytope. 91h:90081  
 Goodman, Jacob E. (with Pollack, Richard M.) New bounds on higher-dimensional configurations and polytopes. 91a:52007  
 Lee, Jon<sup>2</sup> A spectral approach to polyhedral dimension. 91j:52011  
 McMullen, Peter (with Schulte, Egon) Hermitian forms and locally toroidal regular polytopes. 91j:52013  
 Pollack, Richard M. *see* Goodman, Jacob E., 91a:52007  
 Richter, Jürgen (with Sturmfels, Bernd) On the topology and geometric construction of oriented matroids and convex polytopes. 91h:05041  
 Schulte, Egon *see* McMullen, Peter, 91j:52013  
 Sturmfels, Bernd *see* Bayer, Margaret M., 91e:52023 and Richter, Jürgen, 91h:05041  
 Vershik, A. M. (with Chernyakov, A. G.) Fields of convex polyhedra and the Pareto-Smale optimum [MR 84m:58011]. (see 91h:00023)  
 Zhan, Ping *see* Fujishige, Satoru, 91h:90081

## 52B15 Symmetry properties of polytopes

- McMullen, Peter (with Schulte, Egon) Hermitian forms and locally toroidal regular polytopes. 91j:52013  
 — (with Schulte, Egon) Constructions for regular polytopes. 91e:52017  
 Min, Le Quan Geometric parameters of polyhedra and quasicrystals with eight- and twelve-fold rotational symmetry. (Chinese) 91i:52008  
 Monson, B. (with Weiss, Asia Ivić) Regular 4-polytopes related to general orthogonal groups. 91k:52021  
 Schulte, Egon On a class of abstract polytopes constructed from binary codes. 91j:52014  
 — *see also* McMullen, Peter, 91e:52017 and 91j:52013  
 Weiss, Asia Ivić *see* Monson, B., 91k:52021  
 Willis, Jörg M. Diskontinuierliche reguläre Polyeder. (English and Serbo-Croatian summaries) [Discontinuous regular polyhedra] 91k:52022

## 52B20 Lattice polytopes (including relations with commutative algebra and algebraic geometry) [see also 06A08, 13F20, 13Hxx]

- Handelman, D. E. Effectiveness of an affine invariant for indecomposable integral polytopes. 91j:52015  
 Hibb, Takayuki Some results on Ehrhart polynomials of convex polytopes. 91g:52008  
 Posack, Martin Eine Metrik für Polyeder und Gitterpolyeder. (English and Russian summaries) [A metric for polyhedra and lattice polyhedra] 91c:52018  
 Rabinowitz, Stanley A census of convex lattice polygons with at most one interior lattice point. 91f:52019  
 Reuter, K. K. On the order dimension of convex polytopes. 91a:52015  
 Simpson, R. J. Convex lattice polygons of minimum area. 91k:52023  
 Smith, Dean E. On the Cohen-Macaulay property in commutative algebra and simplicial topology. 91f:52020  
 Willis, Jörg M. Nullstellenverteilung zweier konvexgeometrischer Polynome. [Distribution of zeros of two convex-geometric polynomials] 91a:52016

### Items with secondary classifications in 52B20

- Ahlsina, Claes (with Liibre, Jaume) On the length, area and volume of lattice figures. (Serbo-Croatian summary) 91f:52028  
 Bennett, M. K. Rectangular products of lattices. 91h:06015  
 Budach, Lothar (with Graw, Bernd; Meinel, Christoph; Waack, Stephan) ★ Algebraic and topological properties of finite partially ordered sets. 91h:06007  
 Cremona, J. E. (with Landau, Susan) Shrinking lattice polyhedra. 91i:52011  
 Gelfand, I. M. (with Zelevinskii, A. V.; Kapranov, M. M.) Discriminants of polynomials in several variables and triangulations of Newton polyhedra. 91m:14080  
 Graw, Bernd *see* Budach, Lothar; et al., 91h:06007  
 Hibb, Takayuki A numerical characterization of Gorenstein complexes. 91b:13020  
 Kapranov, M. M. *see* Gelfand, I. M.; et al., 91m:14080  
 Landau, Susan *see* Cremona, J. E., 91i:52011  
 Lin, K'Y Ying Exact results for the area-weighted moments of convex polygons on the square lattice. 91f:52027  
 Liibre, Jaume *see* Ahlsina, Claes, 91f:52028  
 Meinel, Christoph *see* Budach, Lothar; et al., 91h:06007  
 Villarreal, Rafael H. Cohen-Macaulay graphs. 91b:13031

- Waack, Stephan *see* Budach, Lothar; et al., 91h:06007  
 Zelevinskii, A. V. *see* Gelfand, I. M.; et al., 91m:14080

## 52B30 Arrangements of hyperplanes

- van Douwen, Eric K. The number of isomorphism classes of spreads. 91e:52020  
 Falk, Michael J. On the algebra associated with a geometric lattice. 91d:52010  
 Gonzalez-Sprinberg, Gerard (with Laffaille, Guy) Sur les arrangements simples de huit droites dans  $\mathbb{RP}^2$ . [On simple arrangements of eight lines in  $\mathbb{RP}^2$ ] 91c:52019  
 Jambu, Michel Yves Fiber-type arrangements and factorization properties. 91g:52009  
 — Arrangements d'hyperplans. II. Topologie et géométrie. I. (English summary) [Arrangements of hyperplanes. II. Topology and geometry. I.] 91h:52006  
 Laffaille, Guy *see* Gonzalez-Sprinberg, Gerard, 91c:52019  
 Yuzvinsky, Sergey Cohomology of local sheaves on arrangement lattices. 91j:52016

### Items with secondary classifications in 52B30

- Beilinson, A. A. (with Varchenko, A. N.; Goncharov, A. B.; Shekhtman, V. V.) Projective geometry and  $K$ -theory. 91k:19006  
 tom Dieck, Tammo Linear plane divisors of homology planes. 91f:14033  
 Gelfand, I. M. (with Zelevinskii, A. V.; Kapranov, M. M.) Discriminants of polynomials in several variables. 91e:14047  
 Goncharov, A. B. *see* Beilinson, A. A.; et al., 91k:19006  
 Kapranov, M. M. *see* Gelfand, I. M.; et al., 91e:14047  
 Kohno, Toshitake Integrable connections related to Manin and Schechtman's higher braid groups. 91d:32051  
 Manin, Yu. I. (with Shekhtman, V. V.) Arrangements of hyperplanes, higher braid groups and higher Bruhat orders. 91m:32042  
 Shekhtman, V. V. *see* Beilinson, A. A.; et al., 91k:19006 and Manin, Yu. I., 91m:32042  
 Varchenko, A. N. The determinant of a matrix of multidimensional hypergeometric integrals. 91c:32032  
 — *see also* Beilinson, A. A.; et al., 91k:19006  
 White, Neil L. Cayley factorization and a straightening algorithm. 91m:15041  
 Zelevinskii, A. V. *see* Gelfand, I. M.; et al., 91e:14047

## 52B35 Gale and other diagrams

- Goodman, Jacob E. (with Pollack, Richard M.; Sturmfels, Bernd) The intrinsic spread of a configuration in  $\mathbb{R}^d$ . 91e:52021  
 Grishukhin, V. P. All facets of the cut cone  $C_n$  for  $n = 7$  are known. 91e:52022  
 Pollack, Richard M. *see* Goodman, Jacob E.; et al., 91e:52021  
 Sturmfels, Bernd *see* Goodman, Jacob E.; et al., 91e:52021

### Items with secondary classifications in 52B35

- Aurenhammer, Franz A relationship between Gale transforms and Voronoi diagrams. 91k:68179  
 Bayer, Margaret M. (with Sturmfels, Bernd) Lawrence polytopes. 91e:52023  
 Filliman, P. Exterior algebra and projections of polytopes. 91f:52015  
 Sturmfels, Bernd *see* Bayer, Margaret M., 91e:52023

## 52B40 Matroids (realizations in the context of convex polytopes, convexity in combinatorial structures, etc.) [see also 05B35]

- Bayer, Margaret M. (with Sturmfels, Bernd) Lawrence polytopes. 91e:52023  
 — (with Klapper, Andrew) A new index for polytopes. 91k:52024  
 Klapper, Andrew *see* Bayer, Margaret M., 91k:52024  
 Korte, Bernhard (with Lovász, László) Polyhedral results for antimatroids. 91e:52024  
 Lovász, László *see* Korte, Bernhard, 91e:52024  
 Sturmfels, Bernd *see* Bayer, Margaret M., 91e:52023

### Items with secondary classifications in 52B40

- Fukuda, Komei (with Tamura, Akihisa) Dualities in signed vector systems. 91k:90147  
 Las Vergnas, Michel Acyclic reorientations of weakly oriented matroids. 91m:05054  
 Tamura, Akihisa *see* Fukuda, Komei, 91k:90147

## 52B45 Dissections and valuations (Hilbert's third problem, etc.)

- Kasimatis, E. A. (with Stein, Sherman) Equidissections of polygons. 91j:52017  
 McMullen, Peter The polytope algebra. 91a:52017  
 — Monotone translation invariant valuations on convex bodies. 91j:52018  
 Patras, Frédéric Filtration du groupe des polytopes et  $\lambda$ -structure du groupe symétrique. (English summary) [Filtration of the group of polytopes and  $\lambda$ -structure on the symmetric group] 91g:52010  
 Pokrovskii, V. G. Existence of polyhedra that do not decompose into equally large simplices. 91c:52020  
 Stein, Sherman *see* Kasimatis, E. A., 91j:52017

### Items with secondary classifications in 52B45

- Dupont, Johan L. (with Sah, Chih-Han) Homology of Euclidean groups of motions made discrete and Euclidean scissors congruences. 91h:22016  
 Monsky, Paul A conjecture of Stein on plane dissections. 91m:52011  
 Sah, Chih-Han Homology of classical Lie groups made discrete. III. 91k:19002  
 — *see also* Dupont, Johan L., 91h:22016  
 Scott, Paul R. Equipartition of convex bodies. 91f:52004

## 52B55 Computational aspects related to convexity {For computational geometry and algorithms, see 68Q20, 68Q25, 68U05; for numerical algorithms, see 65Yxx.}

- Clarkson, Kenneth L. (with Edelsbrunner, Herbert; Guibas, Leonidas J.; Sharir, Micha; Welzl, Emo) Combinatorial complexity bounds for arrangements of curves and spheres. 91f:52021
- Dobkin, David P. (with Friedman, Steven J.; Supowit, Kenneth J.) Delaunay graphs are almost as good as complete graphs. 91e:52025
- Edelsbrunner, Herbert see Clarkson, Kenneth L.; et al., 91f:52021
- Friedman, Steven J. see Dobkin, David P.; et al., 91e:52025
- Guibas, Leonidas J. see Clarkson, Kenneth L.; et al., 91f:52021
- Lawrence, Jim Polytope volume computation. 91j:52019
- Mount, David M. The number of shortest paths on the surface of a polyhedron. 91f:52022
- Sharir, Micha see Clarkson, Kenneth L.; et al., 91f:52021
- Supowit, Kenneth J. see Dobkin, David P.; et al., 91e:52025
- Sutherland, W. R. S. The offsets of a convex polygon. 91f:52023
- Welzl, Emo see Clarkson, Kenneth L.; et al., 91f:52021

### Items with secondary classifications in 52B55

- Abrahamson, Karl On the modality of convex polygons. 91k:52009
- Agarwal, Pankaj K. see van Kreveld, Marc J.; et al., (91e:68016)
- Aurenhammer, Franz A new duality result concerning Voronoi diagrams. 91d:68118
- Avis, David (with Robert, J.-M.; Wenger, Raphael) Lower bounds for line stabbing. 91e:68139
- (with Doskas, Mike) Algorithms for high-dimensional stabbing problems. 91d:68119
- Bajaj, Chanderjit L. (with Dey, Tamal K.) Robust decompositions of polyhedra. 91d:68120
- Bianchi, Gabriele (with Longinetti, M.) Reconstructing plane sets from projections. 91f:68200
- Bokowski, Jürgen (with Richter, Jürgen; Sturmfels, Bernd) Nonrealizability proofs in computational geometry. 91d:68121
- Burkard, Rainer E. (with Rote, Günter; Yao, En Yu; Yu, Zhong Liang) Shortest polygonal paths in space. (German summary) 91g:68157
- Chin, Wei-Pang (with Ntafos, Simeon) Shortest watchman routes in simple polygons. 91g:68159
- Clarkson, Kenneth L. (with Tarjan, Robert Endre; Van Wyk, Christopher J.) A fast Las Vegas algorithm for triangulating a simple polygon. 91d:68123
- Culberson, Joseph (with Reckhow, Robert A.) Orthogonally convex coverings of orthogonal polygons without holes. 91e:68142
- Dey, Tamal K. see Bajaj, Chanderjit L.; et al., 91d:68120
- Doskas, Mike see Avis, David, 91d:68119
- Dyer, Martin E. (with Frieze, A. M.; Kannan, Ravindran) A random polynomial-time algorithm for approximating the volume of convex bodies. 91m:68162
- Edelsbrunner, Herbert (with Guibas, Leonidas J.; Sharir, Micha) The complexity and construction of many faces in arrangements of lines and of segments. 91f:68201
- (with Guibas, Leonidas J.; Sharir, Micha) The complexity of many cells in arrangements of planes and related problems. 91h:68165
- Fischer, Thomas R. M. Lower bound proofs via Voronoi diagrams. (German and Russian summaries) 91g:68162
- Fjällström, Per-Olof (with Katajainen, Jyrki; Levopoulos, Christos; Petersson, Ola) A sublogarithmic convex hull algorithm. 91e:68144
- Frieze, A. M. see Dyer, Martin E.; et al., 91m:68162
- Fuchs, Ulrich see Schwarzkopf, Otfried; et al., 91e:68148
- Goodman, Jacob E. (with Pollack, Richard M.; Sturmfels, Bernd) The intrinsic spread of a configuration in  $\mathbb{R}^d$ . 91e:52021
- Goodrich, Michael T. Triangulating a polygon in parallel. 91f:68202
- Guibas, Leonidas J. (with Hershberger, John) Optimal shortest path queries in a simple polygon. 91g:68164
- see also Edelsbrunner, Herbert; et al., 91f:68201 and 91h:68165
- Haldar, Chandan (with Patnaik, L. M.) Oracle complexities for computational geometry of semi-algebraic sets and Voronoi diagrams. (Not in MR)
- Hershberger, John (with Suri, Subhash) Applications of a semi-dynamic convex hull algorithm. (see 91e:68016)
- see also Guibas, Leonidas J., 91g:68164
- Iwano, Kazuo (with Steiglitz, Kenneth) A semiring on convex polygons and zero-sum cycle problems. 91g:68132
- Kannan, Ravindran see Dyer, Martin E.; et al., 91m:68162
- Katajainen, Jyrki see Fjällström, Per-Olof; et al., 91e:68144
- Kedem, K. (with Sharir, Micha) An efficient motion-planning algorithm for a convex polygonal object in two-dimensional polygonal space. 91f:68203
- Klein, Rolf Combinatorial properties of abstract Voronoi diagrams. 91e:68146
- van Kreveld, Marc J. (with Overmars, Mark H.; Agarwal, Pankaj K.) Intersection queries in sets of disks. (see 91e:68016)
- Lengauer, Thomas ★ Combinatorial algorithms for integrated circuit layout. 91h:68089
- Levopoulos, Christos see Fjällström, Per-Olof; et al., 91e:68144
- Lienhardt, Pascal Barycentric triangulation of generalized maps. (see 91k:68005)
- Longinetti, M. see Bianchi, Gabriele, 91f:68200
- Melzer, Robert A. (with Wu, Angela Y.) Metrically independent sets in the digital plane. 91g:68169
- Nackman, Lee R. (with Srinivasan, Vijay) Bisectors of linearly separable sets. 91h:68183
- Ntafos, Simeon see Chin, Wei-Pang, 91g:68159
- Overmars, Mark H. see van Kreveld, Marc J.; et al., (91e:68016)
- Papadimitriou, Christos H. (with Yannakakis, Mihalis) On recognizing integer polyhedra. 91i:68071
- Patnaik, L. M. see Haldar, Chandan, (Not in MR)
- Petersson, Ola see Fjällström, Per-Olof; et al., 91e:68144
- Pollack, Richard M. see Goodman, Jacob E.; et al., 91e:52021
- (Pross, Bryan) see Lengauer, Thomas, 91h:68089
- Reckhow, Robert A. see Culberson, Joseph, 91e:68142

- Revelles, Jean-Pierre Les droites en géométrie discrète: une définition générale; leurs intersections. [Straight lines in discrete geometry: a general definition; their intersections] (see 91k:68005)
- Richter, Jürgen Kombinatorische Realisierbarkeitskriterien für orientierte Matroide. (English summary) [Combinatorial realizability criteria for oriented matroids] 91d:05038
- see also Bokowski, Jürgen; et al., 91d:68121
- Robert, J.-M. see Avis, David; et al., 91e:68139
- Rote, Günter see Schwarzkopf, Otfried; et al., 91e:68148 and Burkard, Rainer E.; et al., 91g:68157
- Schwarzkopf, Otfried (with Fuchs, Ulrich; Rote, Günter; Welzl, Emo) Approximation of convex figures by pairs of rectangles. 91e:68148
- Sharir, Micha see Edelsbrunner, Herbert; et al., 91f:68201; Kedem, K., 91f:68203 and Edelsbrunner, Herbert; et al., 91h:68165
- Shermer, T. Hiding people in polygons. (German summary) 91e:68149
- Spehner, Jean-Claude Cartes et pavages. (English summary) [Maps and pavings] 91g:68167
- Srinivasan, Vijay see Nackman, Lee R., 91h:68183
- Steiglitz, Kenneth see Iwano, Kazuo, 91g:68132
- Sturmfels, Bernd see Bokowski, Jürgen; et al., 91d:68121 and Goodman, Jacob E.; et al., 91e:52021
- Suri, Subhash see Hershberger, John, (91e:68016)
- Tarjan, Robert Endre see Clarkson, Kenneth L.; et al., 91d:68123
- Unger, Kristel The convex hull problem on special planar point sets. (German and Russian summaries) 91k:68187
- Van Wyk, Christopher J. see Clarkson, Kenneth L.; et al., 91d:68123
- Welzl, Emo see Schwarzkopf, Otfried; et al., 91e:68148
- Wenger, Raphael see Avis, David; et al., 91e:68139
- Wu, Angela Y. see Melzer, Robert A., 91g:68169
- Yannakakis, Mihalis see Papadimitriou, Christos H., 91i:68071
- Yao, En Yu see Burkard, Rainer E.; et al., 91g:68157
- Yu, Zhong Liang see Burkard, Rainer E.; et al., 91g:68157

## 52B60 Isoperimetric problems for polytopes

### Items with secondary classifications in 52B60

- Boček, Leo Eine Verschärfung isoperimetrischer Ungleichungen für Kurven und Polygone. (Russian and Czech summaries) [A strengthening of isoperimetric inequalities for curves and polygons] 91c:52010
- Łutwak, Erwin On the affine isoperimetric inequality. 91g:52006
- Simpson, R. J. Convex lattice polygons of minimum area. 91k:52023

## 52B70 Polyhedral manifolds

- Barnette, D. W.  $W_2$  paths on the torus. 91f:52024
- Brehm, Ulrich How to build minimal polyhedral models of the Boy surface. 91h:52007
- Cacciari, Leo A Riemann-Hurwitz formula for hypermaps congruences. 91g:52011
- Harker, David Two-dimensionally infinite polyhedra with vertices related by symmetry operations. 91m:52008
- Ikhamov, U. (with Sokolov, D. D.) Realizability of lentil-shaped polyhedra in a pseudo-Euclidean space. (Russian) 91f:52025
- Pachner, Udo Shellings of simplicial balls and p.l. manifolds with boundary. 91f:52026
- Sokolov, D. D. see Ikhamov, U., 91f:52025

### Items with secondary classifications in 52B70

- Adams, Collin (with Sherman, William) Minimum ideal triangulations of hyperbolic 3-manifolds. 91m:57009
- Sherman, William see Adams, Collin, 91m:57009

## 52B99 None of the above, but in this section

- Shashkin, Yu. A. The Euler characteristic and multiple coverings. 91d:52011

### Items with secondary classifications in 52B99

- Berenstein, A. D. (with Zelevinskii, A. V.) Tensor product multiplicities and convex polytopes in partition space. 91k:17003
- Hollot, Christopher V. (with Xu, Zhong Ling) When is the image of a multilinear function a polytope? A conjecture. 91a:93055
- Makarov, V. V. Universal coverings and projections of bodies of constant width. (Russian) 91e:52019
- Mills, Janet E. The inverse semigroup of partial symmetries of a convex polygon. 91j:20158
- Xu, Zhong Ling see Hollot, Christopher V., 91a:93055
- Zelevinskii, A. V. see Berenstein, A. D., 91k:17003

## 52Cxx Discrete geometry

### 52C05 Lattices and convex bodies in 2 dimensions [see also 11H06, 11H31, 11P21]

- Doroslovacki, Rade (with Žunić, Jovita) A characterization of finite grid point sets with exact outer approximation. 91a:52018
- Hurkens, C. A. J. Blowing up convex sets in the plane. 91f:52009
- Lin, K'e Ying Exact results for the area-weighted moments of convex polygons on the square lattice. 91f:52027
- Nilze, Komajiro A classification of special points of quasilattices in two dimensions. 91e:52021
- Rabinowitz, Stanley On the number of lattice points inside a convex lattice  $n$ -gon. 91a:52019
- Temesvári, Ágoston H. Über die  $(p, q)$ -Systeme in der euklidischen Ebene. [On  $(p, q)$ -systems in the Euclidean plane] 91a:52020

- Wetwitschka, Karsten Ein isoradiales Problem mit Nebenbedingung im trigonalen Gitter. [An isoradial problem with side condition in the triangular lattice] 91e:52026  
 Žanić, Jovika *see* Dorostovački, Rade, 91a:52018

#### Items with secondary classifications in 52C05

- Coddens, G. Simple geometrical interpretations of quasi-periodic point sets by various concepts of interpenetration. 91e:52031  
 Duneau, Michel (with Ogney, Christophe) Some quasiperiodic tilings as modulated lattices. 91e:52032  
 Lassak, Marek Approximation of plane convex bodies by centrally symmetric bodies. 91a:52061  
 Melter, Robert A. *see* Rosenfeld, Azriel, 91a:68274  
 Mosseri, Rémy *see* Sire, Clément; et al., 91e:52026  
 Nilze, Komajiro Self-similarity of quasilattices in two dimensions. III. Inflation by a nonunit PV number. 91h:82047  
 Ogney, Christophe *see* Duneau, Michel, 91e:52032  
 Rosen, Dennis Coverage of a square lattice by an inclined rectangle. 91b:60013  
 Rosenfeld, Azriel (with Melter, Robert A.) Digital geometry. 91a:68274  
 Sadoc, Jean-François *see* Sire, Clément; et al., 91e:52026  
 Schuster, Peter D. Strings of strongly composite integers and invisible lattice points. 91i:11003  
 Sire, Clément (with Mosseri, Rémy; Sadoc, Jean-François) Geometric study of a 2D tiling related to the octagonal quasiperiodic tiling. (French summary) 91e:52026

#### 52C07 Lattices and convex bodies in $n$ dimensions [see also 11H06, 11H31, 11P21]

- Alsina, Claudi (with Llibre, Jaume) On the length, area and volume of lattice figures. (Serbo-Croatian summary) 91f:52028  
 Aragón, J. L. (with Vázquez Polo, G.; Gómez, Alfredo) A general algorithm for the generation of quasilattices by means of the cut and projection method using the simplex method of linear programming and the Moore-Penrose generalized inverse. 91j:52020  
 Banaszczyk, Wojciech Polar lattices from the point of view of nuclear spaces. 91m:52009  
 — On the lattice packing-covering ratio of finite-dimensional normed spaces. 91i:52010  
 Cremona, J. E. (with Landau, Susan) Shrinking lattice polyhedra. 91i:52011  
 Gómez, Alfredo *see* Aragón, J. L.; et al., 91j:52020  
 Kramer, Peter (with Schlottmann, M.) Dualisation of Voronoi domains and Klotz construction: a general method for the generation of proper space fillings. 91g:52012  
 Landau, Susan *see* Cremona, J. E., 91i:52011  
 Llibre, Jaume *see* Alsina, Claudi, 91f:52028  
 Meiri, G. Analyse von (Kristall-)Gittern. [Analysis of (crystal) lattices] (see 91k:65004)  
 Nilze, Komajiro A classification of special points of icosahedral quasilattices. 91a:52021  
 — Special points of  $(2+1)$ -reducible quasilattices in three dimensions. 91k:52025  
 Schlottmann, M. *see* Kramer, Peter, 91g:52012  
 Schmalz, Wolfgang Wilhelm Search tree method for the determination of similarity operators between arbitrary lattices. 91k:52026  
 Vázquez Polo, G. *see* Aragón, J. L.; et al., 91j:52020  
 Wills, Jörg M. Minkowski's inner and outer quermasses and convex bodies without interior lattice points. 91j:52021

#### Items with secondary classifications in 52C07

- Bennett, M. K. Rectangular products of lattices. 91b:06015  
 Ishida, Masa-Nori Polyhedral Laurent series and Brion's equalities. 91m:14081  
 Rush, J. A. A lower bound on packing density. 91a:11030  
 Scott, Paul R. Axial diameters, width and surface area. 91f:52010  
 Seidel, Johan Jacob Blockplane und ihre Verallgemeinerungen. [Block designs and their generalizations] 91c:05034

#### 52C10 Erdős problems and related topics of discrete geometry [see also 11Hxx]

- Du, Ding Zhu (with Kleitman, Daniel J.) Diameter and radius in the Manhattan metric. 91e:52027  
 Kleitman, Daniel J. *see* Du, Ding Zhu, 91e:52027

#### 52C15 Packing and covering in 2 dimensions [see also 05B40, 11H31]

- Bessis, Daniel *see* Herrmann, Hans J.; et al., 91j:52022  
 Bezdek, András On the density of dual circle coverings. 91c:52022  
 Bolle, U. On the density of multiple packings and coverings of convex discs. 91c:52023  
 Collin de Verdière, Yves Empilements de cercles: convergence d'une méthode de point fixe. [Circle packings: convergence of a fixed-point method] 91b:52012  
 — Empilements de cercles: convergence d'une méthode de point fixe. [Circle packings: convergence of a fixed-point method] 91a:52022  
 Herrmann, Hans J. (with Mantica, G.; Bessis, Daniel) Space-filling bearings. 91j:52022  
 Lindenmayer, Aristid (with Malitz, Jerome; Tuza, Zolt) Self-generating hexagonal cell division patterns. 91f:52029  
 Malitz, Jerome *see* Lindenmayer, Aristid; et al., 91f:52029  
 Mantica, G. *see* Herrmann, Hans J.; et al., 91j:52022  
 Mount, David M. (with Silverman, Ruth) Packing and covering the plane with translates of a convex polygon. 91b:52068  
 Muder, Douglas J. How big is an  $n$ -sided Voronoi polygon? 91e:52028  
 Müller, Carsten Perfekte Rechteckzerlegung. [Perfect decomposition of rectangles] 91j:52023  
 Pfendt, K. *see* Weidman, P. D., 91g:52013  
 Schmitt, Peter Disks with special properties of densest packings. 91m:52010

- Schmitt, Michael Zur Zerlegung von Kreisüberdeckungen  $\hat{U}(r, 1)$  der Ebene in zwei Kreispäckungen  $\hat{P}(1)$  und  $\hat{Q}(r, 1)$ . [On the decomposition of circle coverings  $\hat{U}(r, 1)$  of the plane in two circle packings  $\hat{P}(1)$  and  $\hat{Q}(r, 1)$ ] 91f:52030  
 Schramm, Oded Rigidity of infinite (circle) packings. 91k:52027  
 Silverman, Ruth *see* Mount, David M., 91b:52068  
 Tuza, Zolt *see* Lindenmayer, Aristid; et al., 91f:52029  
 Weidman, P. D. (with Pfendt, K.) On the radial packing of circles in the plane. 91g:52013

#### Items with secondary classifications in 52C15

- Aharonov, Dev The hexagonal packing lemma and discrete potential theory. 91h:31011  
 Burkov, S. E. Ground states of two-dimensional quasicrystals. 91e:82067  
 Edelsbrunner, Herbert (with Robison, Arch D.; Shen, Xiao Jun) Covering convex sets with nonoverlapping polygons. 91i:52001  
 Galántai, A. Remarks on the optimization of the Lehmer-Schur method. 91m:65140  
 He, Zheng-Xu Solving Beltrami equations by circle packing. 91c:30032  
 Hurkens, C. A. J. Blowing up convex sets in the plane. 91i:52009  
 Lubachevsky, Boris D. (with Stillinger, Frank H.) Geometric properties of random disk packings. 91h:82043  
 Perl, Carla Lattices of figures in Minkowski plane. 91m:52004  
 Robison, Arch D. *see* Edelsbrunner, Herbert; et al., 91i:52001  
 Shen, Xiao Jun *see* Edelsbrunner, Herbert; et al., 91i:52001  
 Stillinger, Frank H. *see* Lubachevsky, Boris D., 91h:82043

#### 52C17 Packing and covering in $n$ dimensions [see also 05B40, 11H31]

- Bezdek, András (with Kuperberg, W.) Maximum density space packing with congruent circular cylinders of infinite length. 91e:52029  
 Bezdek, Károly On billiard arcs. 91g:52014  
 Fejes Tóth, G. (with Gritzmann, P.; Wills, Jörg M.) On finite multiple packings. 91i:52012  
 Gritzmann, P. *see* Fejes Tóth, G.; et al., 91i:52012  
 Kuperberg, W. *see* Bezdek, András, 91e:52029  
 Makeev, V. V. Extremal coverings. 91g:52015  
 Wills, Jörg M. *see* Fejes Tóth, G.; et al., 91i:52012  
 Yudis, V. A. Packings of balls in Euclidean space, and extremal problems for trigonometric polynomials. 91a:52023

#### Items with secondary classifications in 52C17

- Banaszczyk, Wojciech On the lattice packing-covering ratio of finite-dimensional normed spaces. 91i:52010  
 Gervois, A. (with Lichtenberg, M.; Oger, L.; Guyon, E.) Coordination number of disordered packings of identical spheres. 91g:60017  
 — *see also* Oger, L.; et al., 91g:60016  
 Guyon, E. *see* Oger, L.; et al., 91g:60016 and Gervois, A.; et al., 91g:60017  
 Juhnke, Friedrich Zur Eindeutigkeit volumenminimaler Ellipsoidüberdeckungen. [On the uniqueness of volume-minimal ellipsoid coverings] 91h:49044  
 Lichtenberg, M. *see* Oger, L.; et al., 91g:60016 and Gervois, A.; et al., 91g:60017  
 Oger, L. (with Lichtenberg, M.; Gervois, A.; Guyon, E.) Determination of the coordination number in disordered packings of equal spheres. 91g:60016  
 — *see also* Gervois, A.; et al., 91g:60017  
 Rosenbloom, M. Yu. (with Tsfasman, M. A.) Multiplicative lattices in global fields. 91i:11072  
 Tsfasman, M. A. *see* Rosenbloom, M. Yu., 91i:11072

#### 52C20 Tilings in 2 dimensions [see also 05B45, 51M20]

- Baake, M. (with Kramer, Peter; Schlottmann, M.; Zeidler, D.) The triangle pattern—a new quasiperiodic tiling with fivefold symmetry. 91b:52013  
 de Bruijn, N. G. Updown generation of Penrose patterns. 91e:52030  
 Coddens, G. Simple geometrical interpretations of quasi-periodic point sets by various concepts of interpenetration. 91e:52031  
 Dijkstra, Edger W. On a problem transmitted by Doug McIlroy. 91a:52024  
 Duneau, Michel (with Mosseri, Rémy; Ogney, Christophe) Approximants of quasiperiodic structures generated by the inflation mapping. 91c:52024  
 — (with Ogney, Christophe) Some quasiperiodic tilings as modulated lattices. 91e:52032  
 Godrèche, C. The sphinx: a limit-periodic tiling of the plane. 91a:52025  
 — (with Luck, J. M.) Quasiperiodicity and randomness in tilings of the plane. 91c:52025  
 Horn, Alastair N. IFSs and the interactive design of tiling structures. (see 91i:58094)  
 Kramer, Peter *see* Baake, M.; et al., 91b:52013  
 Luck, J. M. *see* Godrèche, C., 91c:52025  
 Minsky, Paul A conjecture of Stein on plane dissections. 91m:52011  
 Mosseri, Rémy *see* Duneau, Michel; et al., 91c:52024 and Sire, Clément; et al., 91c:52026  
 Ogawa, Tohru Tessellations and fractals. (Japanese. English summary) 91e:52033  
 Ogney, Christophe *see* Duneau, Michel; et al., 91c:52024 and 91c:52032  
 Preisinger, A. *see* Zobetz, E., 91j:52024  
 Sadoc, Jean-François *see* Sire, Clément; et al., 91c:52026  
 Salom, Olivier Quelles tuiles! (Pavages aperiodesques du plan et automates bidimensionnels). (English summary) [Aperiodic tilings of the plane and two-dimensional automata] 91b:52014  
 Schlottmann, M. *see* Baake, M.; et al., 91b:52013  
 Schmitt, Peter  $n$ -homeohedral types of tilings. 91f:52031  
 Sire, Clément (with Mosseri, Rémy; Sadoc, Jean-François) Geometric study of a 2D tiling related to the octagonal quasiperiodic tiling. (French summary) 91c:52026  
 Secolar, Joshua E. S. Weak matching rules for quasicrystals. 91f:52032  
 Thurston, William P. Conway's tiling groups. 91h:52028  
 Zeidler, D. *see* Baake, M.; et al., 91b:52013  
 Zobetz, E. (with Preisinger, A.) Vertex frequencies in generalized Penrose patterns. 91j:52024



Items with secondary classifications in 52C20

- Arkin, Joseph (with Arney, David C.; Dewald, Lee S.; Kennedy, Charles) Applications of Fibonacci sequences and tiling. 91g:11013  
 Arney, David C. see Arkin, Joseph; et al., 91g:11013  
 Baake, M. (with Joseph, D.; Kramer, Peter; Schlottmann, M.) Root lattices and quasicrystals. 91k:82065  
 de Bruijn, N. G. Updown generation of Beatty sequences. 91d:11006  
 Conway, J. H. (with Lagarias, Jeffrey C.) Tiling with polyominoes and combinatorial group theory. 91a:05030  
 Dewald, Lee S. see Arkin, Joseph; et al., 91g:11013  
 Doroslovacki, Rade (with Tolić, Ratko) Extremal problems in a triangular grid. 91d:52009  
 Godrèche, C. Types of order and diffraction spectra for tilings of the line. 91m:11115  
 Hertel, Elke Zerlegungen von Polygonen. [Decompositions of polygons] 91c:51034 (Jaric, Marko V.) see Introduction to the mathematics of quasicrystals, 91a:52030  
 Joseph, D. see Baake, M.; et al., 91k:82065  
 Kennedy, Charles see Arkin, Joseph; et al., 91g:11013  
 Kenyon, Richard Tiling a polygon with parallelograms. (see 91k:68005)  
 Kramer, Peter see Baake, M.; et al., 91k:82065  
 Lagarias, Jeffrey C. see Conway, J. H., 91a:05030  
 Mosseri, Rémy see Sadoc, Jean-François, 91c:82073  
 Sadoc, Jean-François (with Mosseri, Rémy) A new method to generate quasicrystalline structures: examples in 2D tilings. (French summary) 91c:82073  
 Schlottmann, M. see Baake, M.; et al., 91k:82065  
 Tolić, Ratko see Doroslovacki, Rade, 91d:52009

Items listed otherwise than by author

Introduction to the mathematics of quasicrystals ★ Introduction to the mathematics of quasicrystals. 91a:52030

## 52C22 Tilings in $n$ dimensions [see also 05B45, 51M20]

- Chew, John J. (with Wilker, J. B.) A tiling of  $\mathbb{R}^3$  by nearly congruent rhombi. 91a:52026  
 Corrádi, Keresztély (with Szabó, Sándor) A combinatorial approach for Keller's conjecture. 91j:52025 (Jaric, Marko V.) see Introduction to the mathematics of quasicrystals, 91a:52030  
 Katz, André A topological constraint on the atomic structure of quasicrystals. 91c:52034  
 Makarov, V. S. On some decompositions of the hyperbolic space  $H^3$ . 91a:52027  
 Nielsen, Mark J. Singular points of a star-finite tiling. 91b:52015  
 Senechal, Marjorie (with Taylor, Jean) Quasicrystals: the view from Les Houches. 91a:52028  
 Stein, Sherman The notched cube tiles  $\mathbb{R}^n$ . 91b:52016  
 Szabó, Sándor see Corrádi, Keresztély, 91j:52025  
 Taylor, Jean see Senechal, Marjorie, 91a:52028  
 Wilker, J. B. Tiling  $\mathbb{R}^3$  with circles and disks. 91a:52029  
 — see also Chew, John J., 91a:52026

Items listed otherwise than by author

Introduction to the mathematics of quasicrystals ★ Introduction to the mathematics of quasicrystals. 91a:52030

Items with secondary classifications in 52C22

- Corrádi, Keresztély (with Szabó, Sándor) On the algebraic form of Keller's conjecture. 91d:20025  
 — (with Szabó, Sándor) Cube tiling and covering a complete graph. 91b:05086  
 Damiani, E. (with D'Antona, O.; Naldi, Giovanni; Pavarino, L.) Tiling bricks with bricks. 91f:05040  
 D'Antona, O. see Damiani, E.; et al., 91f:05040  
 Mermin, N. David (with Rabson, David A.; Rokhsar, Daniel S.; Wright, David C.) Stacking quasicrystallographic lattices. 91c:82072  
 Mücke, Lutz Chord length distributions of the Poisson-Voronoi tessellation in higher-dimensional spaces. (see 91m:68007)  
 Naldi, Giovanni see Damiani, E.; et al., 91f:05040  
 Pavarino, L. see Damiani, E.; et al., 91f:05040  
 Rabson, David A. see Mermin, N. David; et al., 91c:82072  
 Rivier, N. The topological structure of grain boundaries. 91b:82049  
 Rokhsar, Daniel S. see Mermin, N. David; et al., 91c:82072  
 Szabó, Sándor Multiple factorizations by cyclic subsets. 91b:20082  
 — see also Corrádi, Keresztély, 91d:20025 and 91b:05086  
 Tarnai, T. Buckling patterns of shells and spherical honeycomb structures. 91c:73049  
 Thurston, William P. Conway's tiling groups. 91k:52028  
 Verger-Gaugry, J.-L. Calculation of 6D atomic surfaces from a given approximant crystalline structure using approximate icosahedral periodic tilings. 91f:82073  
 Wright, David C. see Mermin, N. David; et al., 91c:82072

## 52C25 Rigidity and flexibility of structures [see also 70B15]

- Homma, Masaaki (with Maehara, Hiroshi) Algebraic distance graphs and rigidity. 91c:52027  
 Maehara, Hiroshi see Homma, Masaaki, 91c:52027

## 52C99 None of the above, but in this section

- Bailly, F. see Mosseri, Rémy, 91i:52013  
 Mosseri, Rémy (with Bailly, F.) From approximants to quasicrystals: a nonstandard approach. 91i:52013

## 53-XX Differential geometry {For differential topology, see 57Rxx. For foundational questions of differentiable manifolds, see 58Axx.}

### 53-01 Instructional exposition (textbooks, tutorial papers, etc.)

- Gallot, Sylvestre (with Hulin, Dominique; Lafontaine, Jacques) ★ Riemannian geometry. 91j:53001  
 Han, Seung-Gook Some remarks on covariant derivatives and geodesics in Riemannian surfaces. (Not in MR)  
 Hulin, Dominique see Gallot, Sylvestre; et al., 91j:53001  
 Lafontaine, Jacques see Gallot, Sylvestre; et al., 91j:53001  
 Osserman, Robert Curvature in the eighties. 91i:53001  
 Trofimov, V. V. ★ Введение в геометрию многообразий с симметриями. (Russian) [Introduction to the geometry of manifolds with symmetries] 91a:53001  
 Walter, Rolf ★ Differentialgeometrie. (German) [Differential geometry] 91e:53001

Items with secondary classifications in 53-01

- Destuynder, Philippe ★ Modélisation des coques minces élastiques. (French) [The modelling of elastic thin shells] 91d:73041  
 (Embarek, Djilali) see Postnikov, M., 91j:58002  
 Postnikov, M. ★ Smooth manifolds. 91j:58001  
 — ★ Variétés différentiables. (French) [Differentiable manifolds] 91j:58002  
 (Shokurov, Vladimir) see Postnikov, M., 91j:58001

### 53-02 Research exposition (monographs, survey articles)

- Aminova, A. V. Transformation groups of Riemannian manifolds. (Russian) 91k:53001  
 Lawson, H. Blaine, Jr. (with Michelsohn, Marie-Louise) ★ Spin geometry. 91g:53001  
 Michelsohn, Marie-Louise see Lawson, H. Blaine, Jr., 91g:53001

Items with secondary classifications in 53-02

- Chern, Shing Shen ★ Selected papers. Vol. III. 91c:01049  
 — ★ Selected papers. Vol. IV. 91c:01050  
 Dillen, Frankl (with Vrancken, Luc) Affine differential geometry of hypersurfaces. 91i:53020  
 Osserman, Robert Curvature in the eighties. 91i:53001  
 Vrancken, Luc see Dillen, Frankl, 91i:53020  
 (Wang, Hsien Chung) see Chern, Shing Shen, 91c:01049

### 53-03 Historical (must also be assigned at least one classification number from Section 01)

- Chern, Shing Shen Historical remarks on Gauss-Bonnet. 91b:53001

Items with secondary classifications in 53-03

- Chern, Shing Shen ★ Selected papers. Vol. III. 91c:01049  
 — ★ Selected papers. Vol. IV. 91c:01050  
 (Clifford, W. K.) see Farwell, Ruth, 91a:01023  
 (Enghis, Pavel) see Tarina, Marian, (91k:53005)  
 Farwell, Ruth (with Knee, Christopher) The missing link: Riemann's "Commentatio", differential geometry and tensor analysis. (French and German summaries) 91m:01014  
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 Gelfand, I. M. (with Gindikin, S. G.) Integral geometry and tomography. (Russian) (Not in MR)  
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- Bartseva, T. A. Real 2-surfaces in an octave Hermitian Euclidean plane. (Russian) (Not in MR)
- Dolicanin, Čemal (with Antonova, L. V.). Curvature tensors of complex and dual quadratic elliptic spaces. (Russian) (Not in MR)
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- Sachs, Hans. Zur Theorie der Zykliken des einfach isotropen Raumes  $I_3^{(1)}$ . (English and Serbo-Croatian summaries) [On the theory of cyclides of the simply isotropic space  $I_3^{(1)}$ ] 91i:53029



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- Gerlach, Rita (with Wünsch, Volkmar) Über konforminvariante Tensoren ungerader Stufe in gekrümmten Raum-Zeiten. [On conformally invariant tensors of odd order in curved space-times] (Not in MR)
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- Enghis, Pavel (with Boroica, G.) Generalized  $D$ -recurrent spaces. (see 91k:53005)
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- Azanov, N. P. Determining the vector of an infinitesimal deformation of a membrane that is stretched over a torus. (Russian) (Not in MR)
- Billig, V. A. (with Shelekhov, A. M.) Classification of identities of length 12 of order 4 with one variable in a local analytic loop. (Russian. English summary) (see 91c:53003)
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- Cherevatik, A. S. Plane deformation of a pattern with a grid material structure. (Russian) (Not in MR)  
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- Bácsó, Sándor (with Verhóczy, L.).  $E_1$ -planar mappings of torsion-free spaces with affine connection. (Russian) 91j:53011  
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## 54-XX General topology {For the topology of manifolds of all dimensions, see 57Nxx.}

### 54-01 Instructional exposition (textbooks, tutorial papers, etc.)

- Engelking, Ryszard *★* General topology. 91c:54001
- Fedenko, A. S. *see* Kononov, S. G.; et al., 91k:54001
- Kononov, S. G. (with Prasolov, A. V.; Timokhovich, V. L.; Tralle, A. E.; Fedenko, A. S.) *★* Топология. (Russian) [Topology] 91k:54001
- Losik, M. V. *★* Топология. (Russian) [Topology] (Not in MR)
- Mendelson, Bert *★* Introduction to topology. 91d:54001
- Prasolov, A. V. *see* Kononov, S. G.; et al., 91k:54001
- Timokhovich, V. L. *see* Kononov, S. G.; et al., 91k:54001
- Tralle, A. E. *see* Kononov, S. G.; et al., 91k:54001
- Items with secondary classifications in 54-01
- DePree, John (with Swartz, Charles W.) *★* Introduction to real analysis. 91c:00001
- Magill, K. D., Jr. Errata: "Universal topological spaces" [Amer. Math. Monthly 95 (1988), no. 10, 942-946; MR 89m:54018]. 91c:54021
- Swartz, Charles W. *see* DePree, John, 91c:00001
- Vrabc, Jože *★* Metrični prostori. (Slovenian) [Metric spaces] 91g:54039

### 54-02 Research exposition (monographs, survey articles)

- (Arkhangelskiĭ, A. V.) *see* General topology, 91g:54001
- (Gumkrelidze, R. V.) *see* Current problems in mathematics. Fundamental directions, 91e:54001
- Gemignani, Michael C. *★* Elementary topology. 91k:54002
- Lowen-Colebunders, Eva *★* Function classes of Cauchy continuous maps. 91c:54002
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 (Pontryagin, L. S.) *see* General topology, 91g:54001

Items listed otherwise than by author

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**Encyclopaedia of Mathematical Sciences** ★ General topology. I. 91g:54001

**General topology** ★ General topology. I. 91g:54001

**Itogi Nauki i Tekhniki** ★ *Современные проблемы математики. Фундаментальные направления*. Том 51. (Russian) [Current problems in mathematics. Fundamental directions. Vol. 51] 91e:54001

**Topics in general topology** ★ Topics in general topology. 91a:54001

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Engelking, Ryszard ★ General topology. 91c:54001

James, I. M. ★ Fibrewise topology. 91a:55022

— ★ Introduction to uniform spaces. 91m:54033

## 54-03 Historical (must also be assigned at least one classification number from Section 01)

Gillman, Leonard The Gillman-Henriksen papers. 91h:54001

## 54-06 Proceedings, conferences, collections, etc.

(Arkhangelskii, A. V.) *see* Seminar: General Topology and Topological Algebra, 91e:54002;  
 General topology, 91g:54002 and General topology. Spaces and mappings, 91j:54001

(Fedorchuk, V. V.) *see* General topology, 91g:54002 and General topology. Spaces and mappings, 91j:54001

(Pasynkov, B. A.) *see* General topology. Spaces and mappings, 91j:54001

(Zaitsev, V. I.) *see* General topology, 91g:54002 and General topology. Spaces and mappings, 91j:54001

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**General topology** ★ *Общая топология*. (Russian) [General topology] 91g:54002

**General topology and related fields** ★ *Iso kukanron to sono shuben bunya no kenkyu*. (Japanese) [General topology and related fields] 91m:54001

**General topology. Spaces and mappings** ★ *Общая топология. Пространства и отображения*. (Russian) [General topology. Spaces and mappings] 91j:54001

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**General Topology and Topological Algebra** ★ Seminar on General Topology and Topological Algebra. 91e:54002

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(Boruhav, A. A.) *see* Investigations in topology and geometry, 91a:00017

(O'Shea, Donal B.) *see* General topology, 91g:54001

(Pontryagin, L. S.) *see* General topology, 91g:54001

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**Conference:**

**Topology** ★ *IV Convegno di Topologia*. [Fourth Conference on Topology] 91m:00028

**Encyclopaedia of Mathematical Sciences** ★ General topology. I. 91g:54001

**General topology** ★ General topology. I. 91g:54001

**Investigations in topology and geometry** ★ *Исследования по топологии и геометрии*. (Russian) [Investigations in topology and geometry] 91a:00017

**Sorrento** ★ *IV Convegno di Topologia*. [Fourth Conference on Topology] 91m:00028

## 54Axx Generalities

### 54A05 Topological spaces and generalizations (closure spaces, etc.)

Abd El-Monsef, M. E. (with Lashien, E. F.) Local discrete extensions of supratopologies. 91h:54002

Baranga, Andrei Z-topologies. I. 91e:54003

Čirić, D. (with Mijajlović, Ž.) Topologies on classes. 91k:54003

Dih, K. A. Topological maps. 91g:54003

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Janković, Dragan S. (with Hamlett, T. R.) New topologies from old via ideals. 91g:54004

Kryński, Stanisław A characterization of discrete topological spaces as convexity spaces. 91h:54001

Lashien, E. F. *see* Abd El-Monsef, M. E., 91h:54002

Lowen-Colebunders, Eva (with Szabó, Z. G.) On the simplicity of some categories of closure spaces. 91d:54002

Mahmoud, R. A. New properties of preopeness. (Arabic summary) 91h:54003

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Mijajlović, Ž. *see* Čirić, D., 91k:54003

Szabó, Z. G. *see* Lowen-Colebunders, Eva, 91d:54002

Umehara, Jun-iti (with Maki, Haruo) Operator approaches of weakly Hausdorff spaces. 91d:54003

Zakharov, Valerii Konstantinovich Topological preimages that correspond to classical extensions of a ring of continuous functions. 91e:54004

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Abd El-Monsef, M. E. (with Hanafy, I. M.; El-Deeb, S. N.) Semistrongly  $\theta$ -continuous functions. 91h:54020

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El-Deeb, S. N. *see* Abd El-Monsef, M. E.; et al., 91h:54020

Ganster, Maximilian (with Reilly, Ivan L.) Locally closed sets and LC-continuous functions. 91f:54008

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Lowen-Colebunders, Eva ★ Function classes of Cauchy continuous maps. 91c:54002

Petrov, Nikolai Nikolaevich (with Starostina, S. A.) Minimal graphs with a search number that is less than four. 91f:05095

Ramadas, A. E. On fuzzy preproximity spaces. (Arabic summary) 91c:54012

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Riečanová, Zdena Topology in a quantum logic induced by a measure. 91h:81015

Starostina, S. A. *see* Petrov, Nikolai Nikolaevich, 91f:05095

Topi, U. D. Feebly open sets and some new separation axioms. 91k:54036

### 54A10 Several topologies on one set (change of topology, comparison of topologies, lattices of topologies)

Arya, Shashi Prabha (with Nour, T. M.) Characterizations of  $s$ -normal spaces. 91h:54004

Dorsett, Charles Semiregularization spaces and the semi closure operator,  $s$ -closed spaces, and quasi-irresolute functions. 91e:54005

Dow, Alan (with Watson, W. Stephen) Skula spaces. 91e:54006

Ewert, Janina Semi-closure and related topics in Hashimoto topologies. 91d:54004

Matler, J. (with McMaster, T. B. M.) Iteration of Bankston's "anti"-operation. 91e:54003

McMaster, T. B. M. *see* Matler, J., 91e:54003

Nour, T. M. *see* Arya, Shashi Prabha, 91h:54004

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Zhu, Jing Feng The strongest and weakest topologies in a class of semihomomorphic spaces. (Chinese. English summary) (Not in MR)

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Abd-Allah, Ahmed M. (with Hassan, Ezzat R.)  $\theta$ -generated product topologies for  $X \times Y$ . (Arabic summary) 91m:54014a

— (with Hassan, Ezzat R.) Function spaces and  $\theta$ -generated product topologies. (Arabic summary) 91m:54014b

Alvarez López, Jesús A. On metrization and neighborhood properties. 91c:54040

Baboolal, D. (with Backhouse, J.; Ori, R. G.) On weaker forms of compactness, Lindelöfness and countable compactness. 91c:54031

Backhouse, J. *see* Baboolal, D.; et al., 91c:54031

Di Maio, Giuseppe (with Noiri, Takashi) Remarks on two weak forms of connectedness in bitopological spaces. 91m:54038

Dorsett, Charles Locally nearly compact, nearly  $R_1$ , and other properties defined by using the semiregularization topology. 91h:54036

— Semi-continuous and semi-weakly continuous functions. 91j:54020

van Douwen, Eric K. (with Stone, A. H.) The topology of close approximation. 91j:54025

Ganguly, Sobhakar (with Mukherjee, M. N.) A note on mixed topology for a bitopological space. 91h:54062

Hassan, Ezzat R. *see* Abd-Allah, Ahmed M., 91m:54014a and 91m:54014b

Kirchheim, Bernd On sets of points of semicontinuity in fine topologies generated by an ideal. 91m:54013

Mathew, P. M. On ultraconnected spaces. 91d:54025

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Norden, Jeffrey Pixley-Roy spaces over graphs. 91e:54026

Ori, R. G. *see* Baboolal, D.; et al., 91c:54031

Osmalescu, P. C. Partially continuous functions, new reflecto-coreflective functor and categorical equivalence. 91d:54008

Reilly, Ivan L. (with Vamanamurthy, M. K.) On some questions concerning preopen sets. 91h:54021

Stone, A. H. *see* van Douwen, Eric K., 91j:54025

Vamanamurthy, M. K. *see* Reilly, Ivan L., 91h:54021

### 54A20 Convergence in general topology (sequences, filters, limits, convergence spaces, etc.)

Boldzhiev, B. (with Malykhin, V. I.) The sequentiality is equivalent to the  $\mathcal{F}$ -Fréchet-Urysohn property. 91g:54005

Bolzhiev, B. A. On completeness with respect to ultrafilters. (Russian) 91b:54002

De Prada Vicente, M. A. (with Macho Stadler, Marta)  $t$ -prefilter theory. 91h:54001

Filter, Wolfgang *see* Weber, Karl, 91e:54008

Fleischer, Isidore Order-convergence in posets. 91e:54007

Frit, Roman (with Koutník, Václav) Completions for subcategories of convergence rings. 91k:54004

— (with Zanolin, Fabio) Coarse sequential convergence in groups, etc. 91g:54006

Kočina, Ljubiša On  $\mathcal{F}$ -chain-net spaces. 91f:54001

Koutník, Václav *see* Frit, Roman, 91k:54004

Macho Stadler, Marta *see* De Prada Vicente, M. A., 91h:54001

Malykhin, V. I. *see* Boldzhiev, B., 91g:54005

Trombetta, Maurizio Chain convergences with uniqueness of the limit. (Italian. English summary) 91g:54007

- Weber, Karl (with Filter, Wolfgang) Bewertungen von Limesräumen. (English summary) [Valuations of limit spaces] 91c:54008  
 Wojdowski, Wojciech A Cantor diagonal method for nets. (Russian and Polish summaries) 91c:54004  
 Zalote, Nicolás M. Convergence in relation theory. (Spanish. English summary) 91a:54002  
 Zamolin, Fabio see Frič, Roman, 91g:54006

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- Beattie, R. (with Butzmann, H.-P.; Schroder, Mark) Choquet spaces and groups. 91m:46020  
 Butzmann, H.-P. Convergence structures in functional analysis. 91d:46002  
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 Flachmeyer, Jürgen Diffuse Maße und schwache Konvergenz auf metrischen Räumen. [Diffuse measures and weak convergence on metric spaces] 91h:28006  
 Frič, Roman On plane topologies with high sequential order. 91e:54064  
 Frolík, Zdeněk (with Tironi, Gino) Products of chain-net spaces. 91g:54012  
 Griseisen, Gerhard Cofinally and summation closed sets of filters. 91d:08002  
 Penot, Jean-Paul The cosmic Hausdorff topology, the bounded Hausdorff topology and continuity of polarity. 91k:54012  
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#### 54A25 Cardinality properties (cardinal functions and inequalities, discrete subsets) [see also 03Exx, 04A30] (For ultrafilters, see 54D80.)

- Bella, Angelo On the number of open sets in a homogeneous space. (Italian summary) 91c:54009  
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- Cauty, Robert Sur le prolongement des fonctions continues dans les complexes simpliciaux infinis. (English summary) [Extension of continuous functions in infinite simplicial complexes] 91j:54026
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- Shirokov, L. V. On the characterization of  $AE(n)$ -compacta. (Russian) 91d:54020
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- Dijkstra, Jan J. Characterizing Hilbert space topology in terms of strong negligibility. 91f:57009
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- Chigogidze, A. Ch. On  $UV^n$ -equivalent compacta. 91c:54025
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- Spież, Stanisław see Segal, Jack, 91a:54024

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- Dzhernakyan, M. G. Shape equivalence of compacta in smooth manifolds. 91c:57026
- Extremiana Aldana, José Ignacio (with Hernández, L. J.; Rivas, Martín) Proper obstructions of compact-noncompact type. I, II. (Spanish. English summary) 91a:52<sup>0</sup> 13
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- Bielawski, Roger A selection theorem for open-graph multifunctions. 91g:54024
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- Spakowski, Andrzej On approximation by step multifunctions without compactness conditions. (Czech summary) 91h:54032
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- Dranishnikov, A. N. A fibration that does not accept two disjoint many-valued sections. 91h:54022
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- Lignola, M. B. (with Morgan, Jacqueline) Topological existence and stability for min sup problems. (French summary) 91f:49011
- La, Tong Shan A counterexample to: "A monotone principle of fixed points" [Proc. Amer. Math. Soc. 94 (1985), no. 3, 427-432; MR 87c:54065] by M. R. Tasković. (Chinese) 91c:54098
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- Miklaszewski, Dariusz A reduction of the Nielsen fixed point theorem for symmetric product maps to the Lefschetz theorem. 91j:55003
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- Nguyễn Huy Việt A note on the fixed-point set for multivalued mappings. 91h:54064
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- Planigiani, Giulio Differential inclusions. The Baire category method. 91k:49007  
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## 54C65 Selections [see also 28B20]

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- Fryszkowski, Andrzej Continuous selections of Aumann integrals. 91f:54017
- Nikiforov, V. A. Multivalued selections of finite multiplicity. (Russian) 91k:54033
- Pasicki, Lech Applications of weeds. (Polish summary) 91k:54034
- Sieczak, Włodzimierz A. Concerning continuous selectors for multifunctions with nonconvex values. (Polish summary) 91h:54042
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- Berens, H. (with Finzel, M.) Addendum: "A continuous selection of the metric projection in matrix spaces" [in *Numerical methods of approximation theory*, Vol. 8 (Oberwolfach, 1986), 21–29, Birkhäuser, Basel, 1987; MR 90i:41040]. 91e:41039
- Bielawski, Roger A selection theorem for open-graph multifunctions. 91g:54024
- Bulgakov, A. I. On the existence of continuous branches of multivalued mappings with nonconvex images. (Russian) 91f:26013
- Conti, Giuseppe *see* Anichini, Giuseppe; et al., 91h:54030
- van Douwen, Eric K. Mappings from hyperspaces and convergent sequences. 91h:54013
- Dranishnikov, A. N. A fibration that does not accept two disjoint many-valued sections. 91h:54022
- Finzel, M. *see* Berens, H., 91e:41039
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- Lee, Sung J. (with Nashed, M. Zuhair) Algebraic and topological selections of multi-valued linear relations. 91b:47002
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- Alseda i Soler, Lluís (with Llibre, Jaume; Misiurewicz, Michał; Tresser, Charles) Periods and entropy for Lorenz-like maps. (French summary) 91e:58146
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- Kolov, Boris Entropie topologique et représentation de Burau. (English summary) [Topological entropy and Burau representation] 91e:58095
- Llibre, Jaume *see* Alseda i Soler, Lluís; et al., 91e:58146
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- Borshchev, A. A. Geometry of uniformly continuous mappings. (Russian. English and Georgian summaries) 91k:54035
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- Rajagopalan, Minakshisundaram (with Franklin, S. P.) Spaces of diversity one. 91j:54032
- Sołtyś, Leszek On semi-regular spaces. 91g:54026
- Terada, Toshiji Every zero-dimensional space is cell soluble. 91a:54026
- Tzannes, V. Three countable connected spaces. 91a:54027
- Ulyanov, V. M. Topological characterization of differentiable vector functions. (Russian) (see 91j:54001)
- Vlasov, S. V. Factorization of mappings of  $G$ -spaces onto metrizable spaces. (Russian) (see 91j:54001)

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- Cantone, Domenico (with Omodeo, Eugenio) Topological syllogistic with continuous and closed functions. 91b:03023
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- Gavrilov, V. I. (with Kanatnikov, A. N.) Singularities that can be determined by cluster sets of mappings of topological spaces. (Russian. Serbo-Croatian summary) 91d:54011
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- Jafari, A. A. (with Sourour, Ahmed R.) Continuity properties of Hyperlat and reducing subspaces. 91h:15036
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- Semenov, V. I. (with Sheenka, S. I.) Some extremal problems in the theory of quasicontinuous mappings. 91d:30025
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## 54Dxx Fairly general properties

### 54D05 Connected and locally connected spaces (general aspects)

- Garrett, B. D. Connected plane sets which contain no nondegenerate connected simple graph. 91m:54021
- Watson, W. Stephen Powers of the Sierpiński space. 91g:54027

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- Charatonik, Janusz J. (with Charatonik, Włodzimierz J.; Ricceri, Biagio) Inductively open mappings and spaces with open components. (Serbo-Croatian summary) 91c:54018
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- Di Maio, Giuseppe (with Noiri, Takashi) Remarks on two weak forms of connectedness in bitopological spaces. 91m:54038
- van Douwen, Eric K. Mappings from hyperspaces and convergent sequences. 91b:54013
- Fath Alla, M. A. Generalization of connectedness. (Arabic summary) 91g:54037
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- Katsura, Hidefumi The nonexistence of a continuous surjection from a continuum onto its square. 91c:54047
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### 54D10 Lower separation axioms, $(T_0-T_3, \text{etc.})$

- Arkhangelskii, A. V. (with Khamdi, M. M. Genedi) The position of subspaces in spaces: relative variants of compactness, the Lindelöf property and the separability axioms. 91m:54022
- Averna, Diego Separation properties in  $X$  and  $2^X$  measurable multifunctions and graphs. 91m:54023
- Gula, Josep (with Segura, Isabel) Separation axioms between  $T_{1/2}$  and  $T_0$ . 91c:54046
- Khamdi, M. M. Genedi *see* Arkhangelskii, A. V., 91m:54022
- Mathew, P. M. On ultraconnected spaces. 91d:54025
- Paik, P. *see* Thakur, S. S., 91k:54037
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- Sarkar, Asit Kumar (with Chatterjee, S. K.) Common fixed point theorem and identity mapping. 91f:54025
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- (with Pant, B. D.; Chamola, K. P.) Coincidences and fixed points of Meir-Keeler type contractive mappings on Menger spaces. 91g:54054
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- Bardaro, Carlo (with Ceppitelli, Rita) Fixed point theorems and vector valued minimax theorems. 91m:47082
- Bellenger, J. C. (with Simons, Stephen) Quasiconcave functions and zeros of multifunctions. 91e:46019
- Ben-El-Mechaiekh, H. The coincidence problem for compositions of set-valued maps. 91h:7060
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- Bielawski, Roger (with Górniewicz, Lech) A fixed point index approach to some differential equations. 91b:58012
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- (with Tan, Kok-Keong) Matching theorems, fixed point theorems and minimax inequalities without convexity. 91f:47082
- Dubey, R. P. *see* Pathak, Hemant Kumar, 91k:47145
- Fang, Jin Xuan Fixed-point theorems for mappings in PM-spaces. (Chinese) (Not in MR)
- Fur, Ali Ahmad Separation axioms, subspaces and product spaces in fuzzy topology. (Arabic summary) 91k:54008
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- Shi, De Ming (with Shi, Dong Yang) Fixed-point theorems for  $H$ -type contraction mappings in locally convex spaces. (Chinese. English summary) 91k:47152
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## 54H99 None of the above, but in this section

- Khalimsky, Efim see Kong, T. Y., 91c:54106
- Kong, T. Y. (with Khalimsky, Efim) Polyhedral analogs of locally finite topological spaces. 91c:54106
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- Wang, Feng Qiong The topological game  $\Gamma(X)$  and  $C_p(X)$ . (Chinese. English summary) (Not in MR)
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- Brown, Aldric L. On the connectedness properties of sums in finite-dimensional spaces. 91c:41090
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- Lienhardt, Pascal Barycentric triangulation of generalized maps. (see 91k:68005)
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- Porst, Hans-E. Separation in free algebras over Top and  $k$ -Top. 91d:18002
- Samdanchap, R. T. see Zhdanok, A. I., 91c:54061
- Shakhmatov, D. B. A problem of coincidence of dimensions in topological groups. 91a:54049
- Vlad, Carmen Properties of Wallman type spaces. 91m:54005
- Wraith, G. C. Unsurprising results on localic groups. 91j:22001
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## 54J05 Nonstandard topology [see also 03H05]

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- Norberg, Tommy On Vervaat's sup vague topology. 91c:54107
- Vakil, Nader A nonstandard compactness condition for sets of continuous functions. 91j:54071
- Items with secondary classifications in 54J05
- Brunet, Bernard An elementary nonstandard proof of Stone's representation theorem. 91m:46032
- Cutland, Nigel J. Transfer theorems for  $\pi$ -monads. 91c:03050
- Kalina, Martin (with Zlatoš, Pavol) Some connections between measure, indiscernibility and representation of cuts. 91j:03071
- Zlatoš, Pavol see Kalina, Martin, 91j:03071

## 55-XX Algebraic topology

### 55-01 Instructional exposition (textbooks, tutorial papers, etc.)

- Kosniowski, Czes ★ Introduzione alla topologia algebrica. (Italian) [A first course in algebraic topology] 91k:55001
- (Pittaluga, Marilena) see Kosniowski, Czes, 91k:55001
- Items with secondary classifications in 55-01
- Fedenko, A. S. see Kononov, S. G.; et al., 91k:54001
- Kononov, S. G. (with Prasolov, A. V.; Timokhov, V. L.; Tralle, A. E.; Fedenko, A. S.) ★ Топология. (Russian) [Topology] 91k:54001
- Postnikov, M. ★ Smooth manifolds. 91j:58001
- Prasolov, A. V. see Kononov, S. G.; et al., 91k:54001
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- Timokhov, V. L. see Kononov, S. G.; et al., 91k:54001
- Tralle, A. E. see Kononov, S. G.; et al., 91k:54001

### 55-02 Research exposition (monographs, survey articles)

- Arkowitz, Martin The group of self-homotopy equivalences—a survey. 91i:55001
- (Burns, Robert G.) see Dubrovin, B. A.; et al., 91j:55001
- Dubrovin, B. A. (with Fomenko, A. T.; Novikov, S. P.) ★ Modern geometry—methods and applications. Part III. 91j:55001
- Fomenko, A. T. see Dubrovin, B. A.; et al., 91j:55001
- Kahn, Donald W. Some research problems on homotopy-self-equivalences. (see 91c:55001)
- Novikov, S. P. see Dubrovin, B. A.; et al., 91j:55001

Items listed otherwise than by author

#### Bibliography:

- Groups of self-homotopy equivalences List of papers on or relevant to groups of self-homotopy equivalences. (see 91c:55001)

### 55-03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 55-03

- Adams, J. Frank Talk on Toda's work. 91c:55022
- see also May, J. Peter, 91a:01045
- (Dieudonné, Jean) see Freudenthal, Hans, (Not in MR)
- Freudenthal, Hans History of mathematics—a problem and a paradigm. (Not in MR)
- Harper, John R. The work of Alexander Zabrodsky 1936–1986. 91f:01021
- James, I. M. Reminiscences of a topologist. 91i:01084
- May, J. Peter Reminiscences on the life and mathematics of J. Frank Adams. 91a:01045
- (Toda, Hiroshi) see Adams, J. Frank, 91c:55022
- (Zabrodsky, Alexander) see Harper, John R., 91f:01021

### 55-04 Explicit machine computation and programs (not the theory of computation or programming)

Items with secondary classifications in 55-04

- Sergaert, Francis Free loop spaces and computability in algebraic topology. 91a:55029
- From a noncomputability result to new interesting definitions and computability results. 91h:55011

### 55-06 Proceedings, conferences, collections, etc.

- (Latiolais, P.) see Topology and combinatorial group theory, 91h:55001
- (Piccinini, R. A.) see Groups of self-equivalences and related topics, 91c:55001

Items listed otherwise than by author

#### Conference:

- Groups of Self-Equivalences and Related Topics ★ Groups of self-equivalences and related topics. 91c:55001
- Homotopy Theory ★ International Conference on Homotopy Theory. 91k:55002
- Enfield, NH ★ Topology and combinatorial group theory. 91k:55001



Groups of self-equivalences and related topics ★ Groups of self-equivalences and related topics. 91e:55001

Hanover, NH ★ Topology and combinatorial group theory. 91h:55001

Lecture Notes in Mathematics ★ Groups of self-equivalences and related topics. 91e:55001

— ★ Topology and combinatorial group theory. 91h:55001

Marseille-Luminy ★ International Conference on Homotopy Theory. 91k:55002

Montreal, PQ ★ Groups of self-equivalences and related topics. 91e:55001

Seminar:

Topology ★ Topology and combinatorial group theory. 91h:55001

Topology and combinatorial group theory ★ Topology and combinatorial group theory. 91h:55001

Items with secondary classifications in 55-06

Conference:

Topology ★ IV Convegno di Topologia. [Fourth Conference on Topology] 91m:00028

Sorrento ★ IV Convegno di Topologia. [Fourth Conference on Topology] 91m:00028

## 55Mxx Classical topics {For the topology of Euclidean spaces and manifolds, see 57Nxx.}

### 55M10 Dimension theory [see also 54F45]

Items with secondary classifications in 55M10

Dranishnikov, A. N. On intersections of compacta in Euclidean space. 91h:54024

Karno, Z. (with Krasinkiewicz, J.) On some famous examples in dimension theory. 91h:54065

— see also Karno, Z. 91h:54065

Segal, Jack (with Spiez, Stanislaw) On transversely trivial maps. 91h:54010

Spiez, Stanislaw Imbeddings in  $\mathbb{R}^{2m}$  of  $m$ -dimensional compacta with  $\dim(X \times X) < 2m$ . 91j:54062

— see also Segal, Jack. 91h:54010

### 55M15 Absolute neighborhood retracts [see also 54C55]

Items with secondary classifications in 55M15

Cauty, Robert Structure locale de l'espace des rétractions d'une surface. (English summary) [Local structure of the space of retractions of a surface] 91c:57023

### 55M20 Fixed points and coincidences [see also 54H25]

Brown, Robert Freeman (with Greene, Robert E.; Schirmer, Helga) Fixed points of map extensions. 91a:55001

Dimovski, Dončo (with Geoghegan, Ross) One-parameter fixed point theory. 91e:55002

Dobrenko, R. (with Kucharski, Z.) On the generalization of the Nielsen number. 91g:55001

Freund, Robert M. Combinatorial analogs of Brouwer's fixed-point theorem on a bounded polyhedron. 91d:55001

Geoghegan, Ross see Dimovski, Dončo. 91e:55002

Greene, Robert E. see Brown, Robert Freeman; et al. 91a:55001

Han, You Fa The Smith special index and Borsuk-Ulam type theorems. (Chinese. English summary) 91e:55003

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Kelly, Michael R. Some examples concerning homotopies of fixed point free maps. 91k:55003

Kim, Jae-Ryong The role of the generalized evaluation subgroups in the fixed point theory. 91k:55004

Koler, Boris Point fixe lié à une orbite périodique d'un difféomorphisme de  $\mathbb{R}^2$ . (English summary) [A fixed point linked with a periodic orbit of a diffeomorphism of  $\mathbb{R}^2$ ] 91j:55002

Kryszewski, Wojciech (with Miklaszewski, Dariusz) The Nielsen number of set-valued maps. An approximation approach. 91f:55001

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Kulpa, W. Simplicial approximation of antipodal maps. 91g:55002

Lecki, Andrzej The Nielsen number with respect to a subset on manifolds. 91h:55003

Miklaszewski, Dariusz A reduction of the Nielsen fixed point theorem for symmetric product maps to the Lefschetz theorem. 91j:55003

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Schirmer, Helga A fixed point index for bimaps. 91j:55004

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Skordev, Gencho The Lefschetz fixed point theorem. (Russian summary) 91c:55001

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- Bukhshtaber, V. M. (with Kholodov, A. N.) Formal groups, functional equations and generalized cohomology theories. 91e:55009  
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- Ivanadze, G. B. Projective homology of locally compact spaces based on decompositions and singular subcomplexes. (Russian. English summary) **91d:55004**  
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**55P15 Classification of homotopy type**

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Pritt, Mark D. Homotopy theory of minimal simplicial spaces. 91b:55017

Rodríguez-Machin, Sergio Homotopy theories in additive categories are homotopies of  $\Delta$ -groups. 91f:55008

Schwänzl, Roland see Fiedorowicz, Zbigniew; et al., 91b:55016

Steiner, Richard J. see Fiedorowicz, Zbigniew; et al., 91b:55016

Vogt, Rainer M. see Fiedorowicz, Zbigniew; et al., 91b:55016

Items with secondary classifications in 55U10

Dergachev, V. M. Algebraic  $K$ -groups as homotopy groups of a simplicial analogue of Grassmann manifolds. 91m:19003

Fiedorowicz, Zbigniew (with Loday, Jean-Louis) Crossed simplicial groups and their associated homology. 91j:18018

Kolossov, V. A. Symmetric homology and cohomology. 91a:18017

Loday, Jean-Louis see Fiedorowicz, Zbigniew, 91j:18018

Moerdijk, Ieke Bismplectic sets and the group-completion theorem. 91j:18021

Smith, Jeffrey Henderson Simplicial group models for  $\Omega^*S^*X$ . 91e:55014

#### 55U15 Chain complexes

Barnes, Donald W. (with Lambe, Larry A.) A fixed point approach to homological perturbation theory. 91j:55019

Lambe, Larry A. see Barnes, Donald W., 91j:55019

Mikhailov, E. A.  $\mathbb{Z}$ -projective chain complexes. 91h:55013

Ranicki, Andrew (with Weiss, Michael S.) Chain complexes and assembly. 91f:55009

Weiss, Michael S. see Ranicki, Andrew, 91f:55009

Items with secondary classifications in 55U15

Gugenheim, V. K. A. M. (with Lambe, Larry A.) Perturbation theory in differential homological algebra. I. 91e:55023

Guitart, René Construction of a homology and a cohomology theory associated to a first order formula. (French summary) 91m:03040

Lambe, Larry A. see Gugenheim, V. K. A. M., 91e:55023

Pinarshvili, T. I. Calculations of some cohomology groups of small categories. (Russian. English and Georgian summaries) 91c:18012

Smirnov, V. A.  $\mathbb{Z}$  On the chain complex of an iterated loop space. 91f:55013

#### 55U25 Homology of a product, Künneth formula

Items with secondary classifications in 55U25

Nakas, George On the BP homology and cohomology of  $P^{2n} \wedge P^{2m}$ . 91b:55003

#### 55U30 Duality



Items with secondary classifications in 55U30

Navarro González, Juan Antonio Duality and finite spaces. 91b:18001

### 55U35 Abstract homotopy theory

Brown, Ronald Some problems in nonabelian homotopical and homological algebra. 91j:55020

Shitanda, Yoshimi Abstract homotopy theory and homotopy theory of functor category. 91c:55034

Items with secondary classifications in 55U35

Baues, Hans Joachim (with Dreckmann, Winfried) The cohomology of homotopy categories and the general linear group. 91d:18008

Dreckmann, Winfried see Baues, Hans Joachim, 91d:18008

Nguyen Le Anh On the generalized homotopy property. 91c:55019

Pirashvili, T. I. Cohomology of small categories in homotopical algebra. 91j:18023

Rodríguez-Machín, Sergio Homotopy theories in additive categories are homotopies of  $\Delta$ -groups. 91f:55008

Stramaccia, Luciano Functors between homotopy theories. (French summary) 91m:18019

### 55U40 Topological categories

Items with secondary classifications in 55U40

Aof, Mohamed El-Saeed Abdel-Fattah  $\star$  Topological aspects of holonomy groupoids. 91h:57014

(Pradines, Jean) see Aof, Mohamed El-Saeed Abdel-Fattah, 91h:57014

### 55U99 None of the above, but in this section

Lomonaco, L. An invariant theoretical description of  $\Lambda \otimes A$ . (Italian summary) 91a:55028

Sergeraert, Francis Free loop spaces and computability in algebraic topology. 91a:55029

Items with secondary classifications in 55U99

Frankl, Peter (with Füredi, Zoltán; Kalai, Gil) Shadows of colored complexes. 91b:05005

Füredi, Zoltán see Frankl, Peter; et al., 91b:05005

Kalai, Gil see Frankl, Peter; et al., 91b:05005

## 57-XX Manifolds and cell complexes {For complex manifolds, see 32C10.}

### 57-01 Instructional exposition (textbooks, tutorial papers, etc.)

Items with secondary classifications in 57-01

Fedenko, A. S. see Kononov, S. G.; et al., 91k:54001

Kononov, S. G. (with Prasolov, A. V.; Timokhov, V. L.; Tralle, A. E.; Fedenko, A. S.)

$\star$  Топология. (Russian) [Topology] 91k:54001

Postnikov, M.  $\star$  Smooth manifolds. 91j:58001

Prasolov, A. V. see Kononov, S. G.; et al., 91k:54001

(Shokurov, Vladimir) see Postnikov, M., 91j:58001

Timokhov, V. L. see Kononov, S. G.; et al., 91k:54001

Tralle, A. E. see Kononov, S. G.; et al., 91k:54001

Trefimov, V. V.  $\star$  Введение в геометрию многообразий с симметриями. (Russian) [Introduction to the geometry of manifolds with symmetries] 91a:53001

### 57-02 Research exposition (monographs, survey articles)

Atiyah, Michael Francis The frontier between geometry and physics. 91d:57001

Bott, Raoul H. (with Tu, Loring W.)  $\star$  Дифференциальные формы в алгебраической топологии. (Russian) [Differential forms in algebraic topology] 91j:57001

Coldewey, Hans-Dieter see Zieschang, Heiner; et al., 91c:57001

Farrell, F. Thomas (with Jones, Lowell Edwin)  $\star$  Classical aspherical manifolds. 91k:57001

Freedman, Michael Hartley (with Luo, Feng)  $\star$  Selected applications of geometry to low-dimensional topology. 91k:57002

(Ivanov, N. V.) see Zieschang, Heiner; et al., 91c:57001

Jones, Lowell Edwin see Farrell, F. Thomas, 91k:57001

(Kirillov, A. A.) see Bott, Raoul H., 91j:57001

Luo, Feng see Freedman, Michael Hartley, 91k:57002

(Netsvetov, N. Yu.) see Zieschang, Heiner; et al., 91c:57001

(Savel'ev, I. V.) see Bott, Raoul H., 91j:57001

(Shmel'ev, G. S.) see Bott, Raoul H., 91j:57001

Tu, Loring W. see Bott, Raoul H., 91j:57001

(Viro, O. Ya.) see Zieschang, Heiner; et al., 91c:57001

Vogt, Elmar see Zieschang, Heiner; et al., 91c:57001

Zieschang, Heiner (with Vogt, Elmar; Coldewey, Hans-Dieter)  $\star$  Поверхности и разрывные группы. (Russian) [Surfaces and discontinuous groups] 91c:57001

Items listed otherwise than by author

CBMS Regional Conference Series in Mathematics see Farrell, F. Thomas, 91k:57001

Items with secondary classifications in 57-02

(Burns, Robert G.) see Duhrovin, B. A.; et al., 91j:55001

Duhrovin, B. A. (with Fomenko, A. T.; Novikov, S. P.)  $\star$  Modern geometry—methods and applications. Part III. 91j:55001

Fomenko, A. T.  $\star$  Variational problems in topology. 91j:58024

— see also Duhrovin, B. A.; et al., 91j:55001

Nakahara, Mikio  $\star$  Geometry, topology and physics. 91j:58003

Novikov, S. P. see Duhrovin, B. A.; et al., 91j:55001

### 57-03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 57-03

(Dieudonné, Jean) see Freudenthal, Hans, (Not in MR)

Freudenthal, Hans History of mathematics—a problem and a paradigm. (Not in MR)

Smale, Stephen  $\odot$  The story of the higher-dimensional Poincaré conjecture (what actually happened on the beaches of Rio de Janeiro). 91g:01035

— The story of the higher-dimensional Poincaré conjecture (what actually happened on the beaches of Rio). 91j:01056

### 57-06 Proceedings, conferences, collections, etc.

(Alperin, Roger C.) see Arboreal group theory, 91m:57001

Items listed otherwise than by author

Arboreal group theory  $\star$  Arboreal group theory. 91m:57001

Berkeley, CA  $\star$  Arboreal group theory. 91m:57001

Geometry of manifolds  $\star$  Tayōtai no kikagaku. (Japanese) [Geometry of manifolds] 91c:57001

Symposium:

Geometry of Manifolds  $\star$  Tayōtai no kikagaku. (Japanese) [Geometry of manifolds] 91c:57001

Workshop:

Arboreal Group Theory  $\star$  Arboreal group theory. 91m:57001

Items with secondary classifications in 57-06

(Homma, Tatsuo) see Topology and computer science, 91m:00039

(Kinoshita, Shin'ichi) see Topology and computer science, 91m:00039

(Landweber, Peter S.) see Elliptic curves and modular forms in algebraic topology, 91a:57021

(Latiolais, P.) see Topology and combinatorial group theory, 91h:55001

(Noguchi, Hiroshi) see Topology and computer science, 91m:00039

(Suzuki, Shin'ichi) see Topology and computer science, 91m:00039

(Triccerri, Franco) see Advances in differential geometry and topology, 91k:53002

Items listed otherwise than by author

Advances in differential geometry and topology  $\star$  Advances in differential geometry and topology. 91k:53002

Atami  $\star$  Topology and computer science. 91m:00039

Birthday:

Homma, Tatsuo  $\star$  Topology and computer science. 91m:00039

Kinoshita, Shin'ichi  $\star$  Topology and computer science. 91m:00039

Noguchi, Hiroshi  $\star$  Topology and computer science. 91m:00039

Conference:

Elliptic Curves and Modular Forms in Algebraic Topology  $\star$  Elliptic curves and modular forms in algebraic topology. 91a:57021

Elliptic curves and modular forms in algebraic topology  $\star$  Elliptic curves and modular forms in algebraic topology. 91a:57021

Enfield, NH  $\star$  Topology and combinatorial group theory. 91h:55001

Hanover, NH  $\star$  Topology and combinatorial group theory. 91h:55001

Lecture Notes in Mathematics  $\star$  Elliptic curves and modular forms in algebraic topology. 91a:57021

—  $\star$  Topology and combinatorial group theory. 91h:55001

Princeton, NJ  $\star$  Elliptic curves and modular forms in algebraic topology. 91a:57021

Seminar:

Topology  $\star$  Topology and combinatorial group theory. 91h:55001

Symposium:

Topology and Computer Science  $\star$  Topology and computer science. 91m:00039

Topology and combinatorial group theory  $\star$  Topology and combinatorial group theory. 91h:55001

Topology and computer science  $\star$  Topology and computer science. 91m:00039

### 57Mxx Low-dimensional topology

#### 57M05 Fundamental group, presentations, free differential calculus

Carter, J. Scott Classifying immersed curves. 91d:57002

Goldman, William M. Convex real projective structures on compact surfaces. 91h:57001

Grigorchuk, R. I. (with Kurchanov, P. F.) Classification of epimorphisms from fundamental groups of surfaces to free groups. 91g:57001

Harer, John L. Stability of the homology of the moduli spaces of Riemann surfaces with spin structure. 91e:57002

Klassen, Eric Paul Representations of knot groups in  $SU(2)$ . 91k:57003

Kobayashi, Tsuyoshi Fibered links and unknotting operations. 91c:57002

Kurchanov, P. F. see Grigorchuk, R. I., 91g:57001

Naraki, Isao The fundamental group of the complement for Klein's arrangement of twenty-one lines. 91h:57002

O'Shankill, A. Yu. A comment on my paper: "Diagrams of homomorphisms of surface groups" [Sibirsk. Mat. Zh. 30 (1989), no. 6, 150–171; MR 91c:20028]. (Russian) 91c:57003

## Items with secondary classifications in 57M05

- Alonso, Juan M. Quasi-projective and relative cohomological dimension of groups. 91j:20124
- Cohen, Daniel E. ★ Combinatorial group theory: a topological approach. 91d:20001
- Dicks, Warren (with Dunwoody, M. J.) ★ Groups acting on graphs. 91b:20001
- Droms, Carl *see* Servatius, Herman; et al., 91j:20082
- Dunwoody, M. J. *see* Dicks, Warren, 91b:20001
- Gersten, S. M. (with Stallings, J. R.) Irreducible outer automorphisms of a free group. 91f:20034
- Hempel, John One-relator surface groups. 91g:57009
- Huang, Hai Hua (with Jiang, Bo Ju) Braids and periodic solutions. 91g:58227
- Jiang, Bo Ju *see* Huang, Hai Hua, 91g:58227
- Kohno, Toshiaki Holonomy Lie algebras, logarithmic connections and the lower central series of fundamental groups. 91d:32050
- Kolev, Boris Entropie topologique et représentation de Burau. (English summary) [Topological entropy and Burau representation] 91e:58095
- Kropholler, P. H. Baumslag-Solitar groups and some other groups of cohomological dimension two. 91j:20095
- Ladegallier, Yves Couples de courbes principales sur les surfaces. [Pairs of principal curves on surfaces] 91f:57005
- Naculich, Stephen G. (with Riggs, H. A.; Schnitzer, Howard J.) Group-level duality in WZW models and Chern-Simons theory. 91h:81150
- Ofahanskil, A. Ya. Diagrams of homomorphisms of surface groups. 91e:20028
- Paulin, Frédéric Points fixes des automorphismes de groupe hyperbolique. (English summary) [Fixed points of hyperbolic group automorphisms] 91a:20030
- Peschke, Georg Ends of spaces related by a covering map. 91e:54033
- Riggs, H. A. *see* Naculich, Stephen G.; et al., 91h:81150
- Roussseau, Guy Le groupe fondamental de certains espaces d'orbites régulières de groupes de Weyl affines. [The fundamental group of some regular orbit spaces of affine Weyl groups] 91f:20039
- Sarkaria, K. S. Tucker-Ky Fan colorings. 91c:57021
- A generalized van Kampen-Flores theorem. 91f:57011
- Schnitzer, Howard J. *see* Naculich, Stephen G.; et al., 91h:81150
- Servatius, Brigitte *see* Servatius, Herman; et al., 91j:20082
- Servatius, Herman (with Droms, Carl; Servatius, Brigitte) The finite basis extension property and graph groups. 91j:20082
- Shapiro, Michael David A geometric approach to the almost convexity and growth of some nilpotent groups. 91d:20035
- Stallings, J. R. *see* Gersten, S. M., 91f:20034
- Stein, David Walter Jacques Computing Massey product invariants of links. 91c:57017

## 57M07 Topological methods in group theory

- Alonso, Juan M. Inégalités isopérimétriques et quasi-isométries. (English summary) [Isoperimetric inequalities and quasi-isometries] 91k:57004

## Items with secondary classifications in 57M07

- (Algerin, Roger C.) *see* Arboreal group theory, 91m:57001
- Droms, Carl (with Lewin, Jacques; Servatius, Herman) The Tits conjecture and the five string braid group. 91m:20058
- Imrich, Wilfried (with Turner, Edward C.) Fixed subsets of homomorphisms of free groups. 91m:20035
- Lewin, Jacques *see* Droms, Carl; et al., 91m:20058
- Matsedonskaya, O. On a problem of Andrews and Curtis for  $F(M)$ . 91m:20037
- Servatius, Herman *see* Droms, Carl; et al., 91m:20058
- Skora, Richard K. Geometric actions of surface groups on A-trees. 91k:20035
- Tretkoff, M. Covering spaces, subgroup separability, and the generalized M. Hall property. 91m:20038
- Turner, Edward C. *see* Imrich, Wilfried, 91m:20035

## Items listed otherwise than by author

- Arboreal group theory ★ Arboreal group theory. 91m:57001
- Berkeley, CA ★ Arboreal group theory. 91m:57001
- Workshop:  
Arboreal Group Theory ★ Arboreal group theory. 91m:57001

## 57M10 Covering spaces

- Baker, Mark D. Covers of Dehn fillings on once-punctured torus bundles. II. 91e:57004
- Hansen, Vagn Lundsgaard The characteristic algebra of a polynomial covering map. 91e:57005

## Items with secondary classifications in 57M10

- Choe, Jaigyoung On the existence and regularity of fundamental domains with least boundary area. 91e:49040
- Cohen, Daniel E. ★ Combinatorial group theory: a topological approach. 91d:20001
- Hempel, John The lattice of branched covers over the figure-eight knot. 91b:57016
- James, I. M. ★ Introduction to uniform spaces. 91m:54033
- Jia, Rong Qing Necessary and sufficient conditions for a local homeomorphism to be a finite covering map. (Chinese) (Not in MR)
- Laft, E. (with Sjøerve, D.) Degree-1 maps into lens spaces and free cyclic actions on homology 3-spheres. 91m:57013
- McMullen, Curt Iteration on Teichmüller space. 91a:57008
- Miller, Andy Projecting homeomorphisms from covering spaces. 91e:54014
- Scott, Peter (with Tucker, Thomas) Some examples of exotic noncompact 3-manifolds. 91h:57021
- Sjøerve, D. *see* Laft, E., 91m:57013
- Tucker, Thomas *see* Scott, Peter, 91h:57021

## 57M12 Special coverings, e.g. branched

- Kaneto, Takeshi Heegaard decompositions and 2-fold covering spaces. 91a:57001
- Ocken, Stanley Homology of branched cyclic covers of knots. 91c:57003
- Piergallini, R. Covering moves. 91j:57002
- Items with secondary classifications in 57M12
- Casali, Maria Rita A characterization of three-dimensional handlebodies. (Italian. English summary) 91h:57004
- (with Grasselli, Luigi) 2-symmetric crystallizations and 2-fold branched coverings of  $S^3$ . 91m:57018
- Del Val, Pablo (with Weber, Claude) Plans' theorem for links. 91f:57002
- Grasselli, Luigi *see* Casali, Maria Rita, 91m:57018
- Hempel, John The lattice of branched covers over the figure-eight knot. 91b:57016
- Mednykh, A. D. Hyperelliptic Riemann surfaces and three-dimensional manifolds. 91b:57013
- Montesinos, José María (with Morton, H. R.) Fibred links from closed braids. 91m:57003
- Morton, H. R. *see* Montesinos, José María, 91m:57003
- Neumann, Walter D. (with Wahl, Jonathan M.) Casson invariant of links of singularities. 91c:57022
- Takeuchi, Yoshihiro Orbi-maps and 3-orbifolds. 91b:57014
- Wahl, Jonathan M. *see* Neumann, Walter D., 91c:57022
- Weber, Claude *see* Del Val, Pablo, 91f:57002

## 57M15 Relations with graph theory [see also 05Cxx]

- Barnette, D. W. (with Edelson, Allan L.) All 2-manifolds have finitely many minimal triangulations. 91e:57006
- Edelson, Allan L. *see* Barnette, D. W., 91e:57006
- Items with secondary classifications in 57M15
- van Hoese, C. (with Schrijver, Alexander) Edge-disjoint homotopic paths in a planar graph with one hole. 91g:05034
- Jaeger, François Circuit partitions and the homfly polynomial of closed braids. (French summary) 91c:57008
- Johannson, Klaus Heegaard surfaces in Haken 3-manifolds. 91d:57010
- Kauffman, Louis H. A Tutte polynomial for signed graphs. 91c:05082
- Negami, Selya Graphs which have no finite planar covering. 91b:05068
- (with Watanabe, Shin) Diagonal transformations of triangulation on surfaces. 91g:05038
- Schrijver, Alexander *see* van Hoese, C., 91g:05034
- Saroufi, David B. Lifting map automorphisms and Macbeath's theorem. 91j:05040
- Thomassen, Carsten The graph group problem is NP-complete. 91d:68054
- Watanabe, Shin *see* Negami, Selya, 91g:05038
- Yamamoto, Makoto Knots in spatial embeddings of the complete graph on four vertices. 91m:57007

## 57M20 Two-dimensional complexes

- Benson, David John (with Cohen, F. R.) Mapping class groups of low genus and their cohomology. 91g:57002
- Cohen, F. R. *see* Benson, David John, 91g:57002
- Colin de Verdière, Yves (with Marin, Alexis) Triangulations presque équilatérales des surfaces. [Almost equilateral triangulations of surfaces] 91f:57001
- Hayakawa, Eijiro On some branched surfaces which admit expanding immersions. 91j:57003
- Marin, Alexis *see* Colin de Verdière, Yves, 91f:57001
- Rosicki, Witold On Cartesian powers of 2-polyhedra. 91k:57005

## Items with secondary classifications in 57M20

- Alonso, Juan M. Inégalités isopérimétriques et quasi-isométries. (English summary) [Isoperimetric inequalities and quasi-isometries] 91k:57004
- Bandieri, P. (with Cavicchioli, Alberto; Grasselli, Luigi) Heegaard diagrams, graphs and 3-manifold spines. (Serbo-Croatian summary) 91f:57012a
- (with Cavicchioli, Alberto; Grasselli, Luigi) Errata: "Heegaard diagrams, graphs and 3-manifold spines". 91f:57012b
- Carter, J. Scott Classifying immersed curves. 91d:57002
- Cavicchioli, Alberto *see* Bandieri, P.; et al., 91f:57012a and 91f:57012b
- Cohen, Daniel E. ★ Combinatorial group theory: a topological approach. 91d:20001
- Cumerford, Jonell A. (with Lee, Youn W.) Product of two commutators as a square in a free group. 91j:20070
- Grasselli, Luigi *see* Bandieri, P.; et al., 91f:57012a and 91f:57012b
- Lee, Youn W. *see* Cumerford, Jonell A., 91j:20070
- Metzler, Wolfgang Die Unterscheidung von Homotopietyp und einfachem Homotopietyp bei zweidimensionalen Komplexen. [Distinguishing between homotopy type and simple homotopy type in two-dimensional complexes] 91c:57028
- Penner, Robert C. Bounds on least dilatations. 91m:57010

57M25 Knots and links in  $S^3$  {For higher dimensions, see 57Q45.}

- Adams, Colin (with Hildebrand, Martin; Weeks, Jeffrey) Hyperbolic invariants of knots and links. 91j:57004
- Aitchison, Iain R. Jones polynomials and 3-manifolds. 91a:57002
- Akutsu, Yasuhiro *see* Deguchi, Tetsuo; et al., 91g:57003 and 91g:57004
- Atiyah, Michael Francis The geometry and physics of knots. 91b:57003
- Berger, Mitchell A. Third order invariants of randomly braided curves. (see 91h:76005)
- Birman, Joan S. Recent developments in braid and link theory. 91k:57006
- Bleiler, Steven A. Banding, twisted ribbon knots, and producing reducible manifolds via Dehn surgery. 91e:57007
- Borzhik, Mehmet Emin On twist knots. 91c:57004

- Bradford, Phillip G. The Fibonacci sequence and the time complexity of generating the Conway polynomial and related topological invariants. 91c:57008
- (Bryant, John Logan) *see* Sumners, De Witt, 91a:57006
- Cochran, Tim D. (with Orr, K. E.) Not all links are concordant to boundary links. 91c:57012
- Derivatives of links: Milnor's concordance invariants and Massey's products. 91c:57005
- Links with trivial Alexander's module but nonvanishing Massey products. 91a:57009
- Deguchi, Tetsuo (with Wadati, Miki; Akutsu, Yasuhiro) Knot theory based on solvable models at criticality. 91g:57003
- Braid group representations and link polynomials derived from generalized  $SU(n)$  vertex models. 91c:57006
- Braids, link polynomials and transformations of solvable models. 91c:57010
- (with Akutsu, Yasuhiro) Graded solutions of the Yang-Baxter relation and link polynomials. 91g:57004
- Del Val, Pablo (with Weber, Claude) Plans' theorem for links. 91f:57002
- Dodson, C. T. J. (with Wilkinson, S. A.) Twist and writhe on a torus. 91g:57005
- Domergue, Michel (with Mathieu, Yves) Nœuds dans les 3-variétés à bord qui ne sont pas déterminés par leur complément. (English summary) [Knots in 3-manifolds with boundary that are not determined by their complement] 91c:57011
- Drobozhukhina, Yu. V. An analogue of the Jones polynomial for links in  $RP^3$  and a generalization of the Kauffman-Murasugi theorem. 91c:57001
- Freyd, Peter J. (with Yetter, David N.) Braided compact closed categories with applications to low-dimensional topology. 91c:57019
- Fröhlich, Jürg (with King, Christopher K.) The Chern-Simons theory and knot polynomials. 91c:57012
- (with King, Christopher K.) Two-dimensional conformal field theory and three-dimensional topology. 91d:57003
- Frohman, Charles An unknotting lemma for systems of arcs in  $F \times I$ . 91c:57007
- Gabal, David (with Kazez, William H.) Pseudo-Anosov maps and surgery on fibred 2-bridge knots. 91j:57005
- Ge, Mo Lin (with Li, Yu Quan; Xue, Kang) Extended state model and group approach to new polynomials. 91c:57013
- *see also* Yamagishi, Kengo; et al., 91f:57005
- Goldschmidt, David M. (with Jones, Vaughan Frederick Randal) Metaplectic link invariants. 91c:57014
- Classical link invariants and the Burau representation. 91h:57001
- Guadagnini, E. (with Martellini, M.; Mintchev, M.) Chern-Simons model and new relations between the HOMFLY coefficients. 91d:57004
- (with Martellini, M.; Mintchev, M.) Braids and quantum group symmetry in Chern-Simons theory. 91j:57006
- Habegger, Nathan (with Lin, Xiao Song<sup>2</sup>) The classification of links up to link-homotopy. 91c:57015
- Hatcher, Allen (with Oertel, U.) Boundary slopes for Montesinos knots. 91c:57016
- Hildebrand, Martin *see* Adams, Colin; et al., 91j:57004
- Horne, James H. Skein relations and Wilson loops in Chern-Simons gauge theory. 91f:57003
- Hoste, Jim (with Przytycki, Józef H.) Homotopy skein modules of orientable 3-manifolds. 91c:57006
- (with Nakanishi, Yasutaka; Taniyama, Kouki) Unknotting operations involving trivial tangles. 91m:57002
- Jaeger, François Composition products and models for the homfly polynomial. (French summary) 91a:57003
- Circuit partitions and the homfly polynomial of closed braids. (French summary) 91c:57008
- Jones, Vaughan Frederick Randal On a certain value of the Kauffman polynomial. 91c:57017
- Knot theory and statistical mechanics. 91k:57007
- Baxterization. (Not in MR)
- *see also* Goldschmidt, David M., 91c:57014
- Kanenobu, Takao Examples on polynomial invariants of knots and links. II. 91c:57018
- Jones and  $Q$  polynomials for 2-bridge knots and links. 91b:57004
- Kauffman, Louis H. Knot polynomials and Yang-Baxter models. 91d:57005
- State models for link polynomials. 91c:57008
- Kazez, William H. *see* Gabai, David, 91j:57005
- King, Christopher K. *see* Fröhlich, Jürg, 91d:57003 and 91c:57012
- Kobayashi, Tsuyoshi Uniqueness of minimal genus Seifert surfaces for links. 91c:57009
- A criterion for detecting inequivalent tunnels for a knot. 91a:57004
- Kohno, Toshiaki Monodromy representations of braid groups. (Japanese) 91c:57010
- *see also* New developments in the theory of knots, 91h:57003
- (Lacher, R. C.) *see* Sumners, De Witt, 91a:57006
- Levine, J. P. Link concordance and algebraic closure. II. 91g:57007
- Li, Yu Quan *see* Ge, Mo Lin; et al., 91c:57013
- Lia, Xiao Song<sup>2</sup> *see* Habegger, Nathan, 91c:57015
- Livingston, Charles Links not concordant to boundary links. 91c:57011
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- Dimovski, Dončo (with Repovš, Dušan; Shchepin, E. V.)  $C^\infty$ -homogeneous curves on orientable closed surfaces. 91e:57023
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- Cohen, F. R. (with Cohen, Ralph L.; Mann, Benjamin Michael; Milgram, R. James) Divisors and configurations on a surface. 91a:55013
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- Cohen, Ralph L. see Cohen, F. R.; et al., 91a:55013
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- Colin de Verdière, Yves (with Marin, Alexis) Triangulations presque équilatérales des surfaces. [Almost equilateral triangulations of surfaces] 91f:57001

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## 57N10 Topology of general 3-manifolds [see also 57Mxx]

- Aitchison, Iain R. (with Rubinstein, J. Hyam) Heaven & hell. 91e:57024
- Baird, Paul Harmonic morphisms and circle actions on 3- and 4-manifolds. (French summary) 91e:57025
- Boileau, Michel (with Otal, Jean-Pierre) Sur les scindements de Heegaard du tore  $T^3$ . (English summary) [On the Heegaard splittings of the torus  $T^3$ ] 91k:57006
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#### 57Q10 Simple homotopy type, Whitehead torsion, Reidemeister-Franz torsion, etc. [see also 19B28]

- Forman, Robin Difference operators, covering spaces and determinants. 91a:57012  
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 Toda, Morikazu ★ Nonlinear waves and solitons. 91f:35001  
 Items listed otherwise than by author  
 Universality in chaos ★ Universality in chaos. 91e:58124

### 58-03 Historical (must also be assigned at least one classification number from Section 01)

- Crilly, A. J. (with Earnshaw, R. A.; Jones, Huw) Introduction. Fractals and chaos. (see 91i:58094)

- Earnshaw, R. A. *see* Crilly, A. J.; et al., (91i:58094)  
 Jones, Huw *see* Crilly, A. J.; et al., (91i:58094)

#### Items with secondary classifications in 58-03

- Arnold, V. I. ★ Huygens and Barrow, Newton and Hooke. 91h:01014  
 (Barrow, Isaac) *see* Arnold, V. I., 91h:01014  
 Crilly, Tony The roots of chaos—a brief guide. (see 91i:58094)  
 (Hooke, Robert) *see* Arnold, V. I., 91h:01014  
 (Huygens, Christiaan) *see* Arnold, V. I., 91h:01014  
 Jones, Huw Fractals before Mandelbrot: a selective history. (see 91i:58094)  
 (Leibniz, Gottfried Wilhelm) *see* Arnold, V. I., 91h:01014  
 (Lévy, Paul) *see* Milman, Vitali D., 91d:01005  
 Milman, Vitali D. The heritage of P. Lévy in geometrical functional analysis. 91d:01005  
 Neimark, Yu. I. Theory of oscillations yesterday and today. (Russian) 91f:01016  
 (Newton, Isaac) *see* Arnold, V. I., 91h:01014  
 Ollershaw, Kathleen Some personal delights in geometry—from earliest days to fractals. (Not in MR)  
 (Primrose, Eric J. F.) *see* Arnold, V. I., 91h:01014  
 Sussman, Héctor J. Thirty years of optimal control. Was the path unique? 91e:01018  
 Takens, Floris On Poincaré's geometric investigations of the equations of classical mechanics. 91h:58077

### 58-04 Explicit machine computation and programs (not the theory of computation or programming)

- Abelson, Harold (with Sussman, Gerald Jay) The dynamicist's workbench. I. Automatic preparation of numerical experiments. (see 91f:00012)  
 Gerdt, V. P. (with Shabat, A. B.; Svinolupov, S. I.; Zharkov, A. Yu.) Computer algebra application for investigating integrability of nonlinear evolution systems. 91a:58002  
 Grayson, Matthew (with Grossman, Robert) Vector fields and nilpotent Lie algebras. (see 91f:00012)  
 Grossman, Robert *see* Grayson, Matthew, (91f:00012)  
 Rand, Richard H. Perturbation methods and computer algebra. (see 91f:00012)  
 Shabat, A. B. *see* Gerdt, V. P.; et al., 91a:58002  
 Sussman, Gerald Jay *see* Abelson, Harold, (91f:00012)  
 Svinolupov, S. I. *see* Gerdt, V. P.; et al., 91a:58002  
 Zharkov, A. Yu. *see* Gerdt, V. P.; et al., 91a:58002

#### Items with secondary classifications in 58-04

- Akhfir, O. (with Blankenship, G. L.) Symbolic computations in differential geometry applied to nonlinear control systems. (see 91f:00012)  
 Barnsley, Michael F. ★ The Desktop Fractal Design System. 91h:58062  
 Blankenship, G. L. *see* Akhfir, O., (91f:00012)  
 Chai, Lu *see* Liu, Shu Sheng; et al., (91b:00048)  
 Channell, Paul J. (with Scovel, C.) Symplectic integration of Hamiltonian systems. 91g:58073  
 Chow, Shui-Nee (with Drachman, Byron; Wang, Duo) Computation of normal forms. 91c:34001  
 Dellnitz, Michael Numerische Behandlung der Hopf-Verzweigung in Systemen mit Symmetrie. [Numerical treatment of the Hopf bifurcation in systems with symmetry] 91m:58113  
 Dmitriev, A. S. (with Kislov, V. Ya.) ★ Стохастические колебания в радиофизике и электронике. (Russian) [Stochastic oscillations in radiophysics and electronics] 91b:58237  
 Drachman, Byron *see* Chow, Shui-Nee; et al., 91c:34001  
 Fateman, Richard J. (with Grossman, Robert) Computer algebra and operators. (see 91f:00012)  
 Fuchssteiner, Benno *see* Wiwianka, W., 91g:58136  
 Gragert, P. K. H. Lie algebra computations. 91f:17002  
 Grammaticos, B. (with Moulin Ollagnier, Jean; Ramani, A.; Strelny, J.-M.; Rauch-Wojciechowski, Stefan) Integrals of quadratic ordinary differential equations in  $\mathbb{R}^3$ : the Lotka-Volterra system. 91b:58214  
 Grasman, Johan Using the computer in the analysis of nonlinear systems with a strange attractor. 91b:58148  
 Grassberger, Peter An optimized box-assisted algorithm for fractal dimensions. 91d:58138  
 Grossman, Robert *see* Fateman, Richard J., (91f:00012)  
 (Gulyaev, Yu. V.) *see* Dmitriev, A. S., 91b:58237  
 Kaneko, Kunihiko *see* Konishi, Tetsuro, (Not in MR)  
 Khibnik, A. I. LINBF: a program for continuation and bifurcation analysis of equilibria up to codimension three. (see 91f:00017)  
 Kislov, V. Ya. *see* Dmitriev, A. S., 91b:58237  
 Klimov, D. M. (with Rudenko, V. M.; Zhuravlev, V. F.) Application of Lie group and computer algebra to nonlinear mechanics. 91c:70029  
 Konishi, Tetsuro (with Kaneko, Kunihiko) Diffusion in Hamiltonian chaos and its size dependence. (Not in MR)  
 Ku, Y. H. (with Sun, Xiaoguang) CHAOS and limit cycle in Duffing's equation. 91e:58115  
 Liu, Shu Sheng (with Sun, Yong Da; Chai, Lu) Experimental study on bifurcations in a circular Couette system. (see 91b:00048)  
 Moulin Ollagnier, Jean *see* Grammaticos, B.; et al., 91b:58214  
 Ramani, A. *see* Grammaticos, B.; et al., 91b:58214  
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 Scovel, C. *see* Channell, Paul J., 91g:58073  
 Strelny, J.-M. *see* Grammaticos, B.; et al., 91b:58214  
 Sun, Xiaoguang *see* Ku, Y. H., 91e:58115  
 Sun, Yong Da *see* Liu, Shu Sheng; et al., (91b:00048)  
 van Veldhuizen, M. On the approximation of an invariant curve. (see 91f:65004)  
 Wang, Duo *see* Chow, Shui-Nee; et al., 91c:34001  
 Wiwianka, W. (with Fuchssteiner, Benno) Algorithms to detect complete integrability in 1 + 1 dimension. 91g:58136



- Yang, Lu *see* Zhang, Jing Zhong; et al., 91e:58151a and 91e:58151b  
 Zhang, Jing Zhong (with Yang, Lu; Zhang, Lei<sup>2</sup>) The criterion algorithm of relation of implication between periodic orbits. I. 91e:58151a  
 — (with Yang, Lu; Zhang, Lei<sup>2</sup>) The criterion algorithm of relation of implication between periodic orbits. II. 91e:58151b  
 Zhang, Lei<sup>2</sup> *see* Zhang, Jing Zhong; et al., 91e:58151a and 91e:58151b  
 Zhuravlev, V. F. *see* Klimov, D. M.; et al., 91c:70029

## 58-06 Proceedings, conferences, collections, etc.

- (Aisina, Claudio) *see* Conference: Iteration Theory, 91h:58002  
 (Arnol'd, V. I.) *see* Theory of singularities and its applications, 91i:58003  
 (Boccaro, Nino) *see* Partially integrable evolution equations in physics, 91e:58004  
 (Carillo, Sandra) *see* Nonlinear evolution equations and dynamical systems, 91f:58001  
 (Christiansen, Peter L.) *see* Structure, coherence and chaos in dynamical systems, 91j:58005  
 (Collet, P.) *see* Hyperbolic behaviour of dynamical systems, 91i:58001  
 (Conte, Robert) *see* Partially integrable evolution equations in physics, 91e:58004  
 (Dazord, Pierre) *see* Symplectic geometry, groupoids, and integrable systems, 91m:58004  
 (Dewar, Robert L.) *see* Chaos & order, 91m:58002  
 (Francaviglia, Mauro) *see* Mechanics, analysis and geometry: 200 years after Lagrange, 91k:58003  
 (François, Jean-Pierre) *see* Bifurcations of planar vector fields, 91j:58004  
 (Harnad, J.) *see* Hamiltonian systems, transformation groups and spectral transform methods, 91m:58003  
 (Joshi, Nalin) *see* Chaos & order, 91m:58002  
 (Kawakami, Hiroshi) *see* Bifurcation phenomena in nonlinear systems and theory of dynamical systems, 91h:58001  
 (Kupersmidt, Boris A.) *see* Integrable and superintegrable systems, 91i:58002  
 (Küpper, Tassilo) *see* Bifurcation and chaos: analysis, algorithms, applications, 91m:58001  
 (Lagrange, Joseph Louis) *see* Mechanics, analysis and geometry: 200 years after Lagrange, 91k:58003  
 (Ledrappier, François) *see* Hyperbolic behaviour of dynamical systems, 91i:58001  
 (Leonov, G. A.) *see* Nonlinear dynamics and quantum dynamical systems, 91e:58003  
 (Llibre, Jaume) *see* Conference: Iteration Theory, 91h:58002  
 (Łojasiewicz, Stanisław) *see* Singularities, 91k:58004  
 (Marsden, Jerrold E.) *see* Hamiltonian systems, transformation groups and spectral transform methods, 91m:58003  
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 (Parmentier, Robert D.) *see* Structure, coherence and chaos in dynamical systems, 91j:58005  
 (Ragnisco, O.) *see* Nonlinear evolution equations and dynamical systems, 91f:58001  
 (Reitmann, Volker) *see* Nonlinear dynamics and quantum dynamical systems, 91e:58003  
 (Roussarie, R.) *see* Bifurcations of planar vector fields, 91j:58004  
 (Schneider, F. W.) *see* Bifurcation and chaos: analysis, algorithms, applications, 91m:58001  
 (Schulze, Bert-Wolfgang) *see* Seminar: Analysis, Karl-Weierstrass-Institute of Mathematics, 91f:58002  
 (Seydel, Rüdiger) *see* Bifurcation and chaos: analysis, algorithms, applications, 91m:58001  
 (Simó, Carlos) *see* Conference: Iteration Theory, 91h:58002  
 (Targowski, Gylö) *see* Conference: Iteration Theory, 91h:58002  
 (Thibault, R.) *see* Conference: Iteration Theory, 91h:58002  
 (Timmermann, Werner) *see* Nonlinear dynamics and quantum dynamical systems, 91e:58003  
 (Triebel, Hans) *see* Seminar: Analysis, Karl-Weierstrass-Institute of Mathematics, 91f:58002  
 (Troger, H.) *see* Bifurcation and chaos: analysis, algorithms, applications, 91m:58001  
 (Weinstein, Alan D.) *see* Symplectic geometry, groupoids, and integrable systems, 91m:58004  
 (Zakharov, V. E.) *see* What is integrability, 91k:58005

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- Berkeley, CA ★ Symplectic geometry, groupoids, and integrable systems. 91m:58004  
 Berlin ★ Seminar Analysis of the Karl-Weierstrass-Institute of Mathematics. 1986/87. 91f:58002  
 Bifurcation and chaos: analysis, algorithms, applications ★ Bifurcation and chaos: analysis, algorithms, applications. 91m:58001  
 Bifurcation phenomena in nonlinear systems and theory of dynamical systems ★ Bifurcation phenomena in nonlinear systems and theory of dynamical systems. 91h:58001  
 Bifurcations of planar vector fields ★ Bifurcations of planar vector fields. 91j:58004  
 Caldes de Malavella ★ European Conference on Iteration Theory. 91h:58002  
 Canberra ★ Chaos & order. 91m:58002  
 Chaos and three-dimensional structure of turbulence ★ Midare no sanjikanaka to kaosu. II. (Japanese) [Chaos and three-dimensional structure of turbulence. II] 91k:58002  
 Chaos & order ★ Chaos & order. 91m:58002  
 Conference:  
 Bifurcation and Chaos: Analysis, Algorithms, Applications ★ Bifurcation and chaos: analysis, algorithms, applications. 91m:58001  
 Bifurcation Phenomena in Nonlinear Systems and Theory of Dynamical Systems ★ Bifurcation phenomena in nonlinear systems and theory of dynamical systems. 91h:58001  
 Iteration Theory ★ European Conference on Iteration Theory. 91h:58002  
 Differential analysis and differential topological geometry ★ Bibun kaiseki to bibun isô kika. [Differential analysis and differential topological geometry] 91e:58002  
 Gaussig ★ Nonlinear dynamics and quantum dynamical systems. 91e:58003  
 Hamiltonian systems, transformation groups and spectral transform methods ★ Hamiltonian systems, transformation groups and spectral transform methods. 91m:58003  
 Hyperbolic behaviour of dynamical systems ★ Hyperbolic behaviour of dynamical systems. 91i:58001  
 Integrable and superintegrable systems ★ Integrable and superintegrable systems. 91i:58002  
 Kolymbari ★ Nonlinear evolution equations and dynamical systems. 91f:58001  
 Kyoto ★ Bifurcation phenomena in nonlinear systems and theory of dynamical systems. 91h:58001  
 Lecture Notes in Mathematics ★ Bifurcations of planar vector fields. 91j:58004  
 Les Houches ★ Partially integrable evolution equations in physics. 91e:58004  
 Luminy ★ Bifurcations of planar vector fields. 91j:58004

Lyngby ★ Structure, coherence and chaos in dynamical systems. 91j:58005

Mechanics, analysis and geometry: 200 years after Lagrange ★ Mechanics, analysis and geometry: 200 years after Lagrange. 91k:58003

Meeting:

Bifurcations of Planar Vector Fields ★ Bifurcations of planar vector fields. 91j:58004  
 Hyperbolic Behaviour of Dynamical Systems ★ Hyperbolic behaviour of dynamical systems. 91i:58001

Miniconference:

Chaos and Order ★ Chaos & order. 91m:58002

Montreal, PQ ★ Hamiltonian systems, transformation groups and spectral transform methods. 91m:58003

NATO Advanced Study Institute:

Partially Integrable Nonlinear Evolution Equations and their Physical Applications ★ Partially integrable evolution equations in physics. 91e:58004

Nonlinear dynamics and quantum dynamical systems ★ Nonlinear dynamics and quantum dynamical systems. 91e:58003

Nonlinear evolution equations and dynamical systems ★ Nonlinear evolution equations and dynamical systems. 91f:58001

Paris ★ Hyperbolic behaviour of dynamical systems. 91i:58001

Partially integrable evolution equations in physics ★ Partially integrable evolution equations in physics. 91e:58004

Seminar:

Analysis, Karl-Weierstrass-Institute of Mathematics ★ Seminar Analysis of the Karl-Weierstrass-Institute of Mathematics. 1986/87. 91f:58002

Geometry ★ Symplectic geometry, groupoids, and integrable systems. 91m:58004

Nonlinear Dynamics and Quantum Dynamical Systems ★ Nonlinear dynamics and quantum dynamical systems. 91e:58003

Singularities ★ Singularities. 91k:58004

Structure, coherence and chaos in dynamical systems ★ Structure, coherence and chaos in dynamical systems. 91j:58005

Symplectic geometry, groupoids, and integrable systems ★ Symplectic geometry, groupoids, and integrable systems. 91m:58004

Symposium:

Chaos and Three-dimensional Structure of Turbulence ★ Midare no sanjikanaka to kaosu. II. (Japanese) [Chaos and three-dimensional structure of turbulence. II] 91k:58002

Differential Analysis and Differential Topological Geometry ★ Bibun kaiseki to bibun isô kika. [Differential analysis and differential topological geometry] 91e:58002

Theory of singularities and its applications ★ Theory of singularities and its applications. 91i:58003

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What is integrability ★ What is integrability? 91k:58005

Workshop:

Hamiltonian Systems, Transformation Groups and Spectral Transform Methods ★ Hamiltonian systems, transformation groups and spectral transform methods. 91m:58003

Nonlinear Evolution Equations and Dynamical Systems ★ Nonlinear evolution equations and dynamical systems. 91f:58001

Structure, Coherence and Chaos in Dynamical Systems ★ Structure, coherence and chaos in dynamical systems. 91j:58005

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Items with secondary classifications in 58-06

(Berger, Melvyn S.) *see* Mathematics of nonlinear science, 91e:00026

(Concus, Paul) *see* Geometric analysis and computer graphics, 91g:00045

(Crilly, A. J.) *see* Fractals and chaos, 91i:58094

(De Dier, Bart) *see* Continuation and bifurcations: numerical techniques and applications, 91f:00017

(Devaney, Robert L.) *see* Chaos and fractals, 91a:58130

(Earnshaw, R. A.) *see* Fractals and chaos, 91i:58094

(Ferraz de Camargo F., A.) *see* Nonlinear physical phenomena, 91i:00022

(Finn, Robert) *see* Geometric analysis and computer graphics, 91g:00045

(Francaviglia, Mauro) *see* Global geometry and mathematical physics, 91h:00028

(Gherardelli, Francesco) *see* Global geometry and mathematical physics, 91h:00028

(Golubitsky, M.) *see* Proceedings: Conference on Bifurcation Theory and its Numerical Analysis, 91h:00048

(Hoffman, David A.) *see* Geometric analysis and computer graphics, 91g:00045

(Iooss, Gérard) *see* Proceedings: Conference on Bifurcation Theory and its Numerical Analysis, 91h:00048

(Janyška, Josef) *see* Differential geometry and its applications, 91b:53002

(Jones, Haw) *see* Fractals and chaos, 91i:58094

(Keen, Linda) *see* Chaos and fractals, 91a:58130

(Krupka, Demeter) *see* Differential geometry and its applications, 91b:53002

(Li, Kai Tai) *see* Proceedings: Conference on Bifurcation Theory and its Numerical Analysis, 91h:00048

(Marsden, Jerrold E.) *see* Proceedings: Conference on Bifurcation Theory and its Numerical Analysis, 91h:00048

(Oliveira, Fernando) *see* Nonlinear physical phenomena, 91i:00022

(Oświecim, R.) *see* Nonlinear physical phenomena, 91i:00022

(Ostianu, N. M.) *see* Problems in geometry, 91k:53004

(Roose, Dirk) *see* Continuation and bifurcations: numerical techniques and applications, 91f:00017

(Shapere, Alfred) *see* Geometric phases in physics, 91h:81004

(Shil'nikov, L. P.) *see* Methods in qualitative theory and bifurcation theory, 91k:58032

(Spence, Alastair) *see* Continuation and bifurcations: numerical techniques and applications, 91f:00017

(Wilczek, Frank) *see* Geometric phases in physics, 91h:81004

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Berkeley, CA ★ Geometric analysis and computer graphics. 91g:00045

Brasília ★ Nonlinear physical phenomena. 91i:00022

**Birno** ★ Differential geometry and its applications. 91b:53002

**Chaos and fractals** ★ Chaos and fractals. 91a:58130

**Conference:**

**Bifurcation Theory and its Numerical Analysis** ★ Proceedings of the International

Conference on Bifurcation Theory and its Numerical Analysis. 91b:00048

**Differential Geometry and its Applications** ★ Differential geometry and its applications.

91b:53002

**Contemporary Mathematics** ★ Mathematics of nonlinear science. 91e:00026

**Continuation and bifurcations: numerical techniques and applications** ★ Continuation and bifurcations: numerical techniques and applications. 91f:00017

**Differential geometry and its applications** ★ Differential geometry and its applications.

91b:53002

**Fractals and chaos** ★ Fractals and chaos. 91i:58094

**Geometric analysis and computer graphics** ★ Geometric analysis and computer graphics.

91g:00045

**Geometric phases in physics** ★ Geometric phases in physics. 91h:81004

**Global geometry and mathematical physics** ★ Global geometry and mathematical physics.

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**Itogi Nauki i Tekhniki** ★ Проблемы геометрии. Том 22. (Russian) [Problems in geometry.

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**Lecture Notes in Mathematics** ★ Global geometry and mathematical physics. 91h:00028

**Leuven** ★ Continuation and bifurcations: numerical techniques and applications. 91f:00017

**Mathematics of nonlinear science** ★ Mathematics of nonlinear science. 91e:00026

**Meeting:**

**Proceedings of Symposia in Applied Mathematics** ★ Chaos and fractals. 91a:58130

**Methods in qualitative theory and bifurcation theory** ★ Методы качественной теории и

теории бифуркаций. (Russian) [Methods in qualitative theory and bifurcation theory]

91k:53032

**Montecatini Terme** ★ Global geometry and mathematical physics. 91h:00028

**NATO Advanced Research Workshop:**

**Continuation and Bifurcations: Numerical Techniques and Applications** ★ Continuation

and bifurcations: numerical techniques and applications. 91f:00017

**Nonlinear physical phenomena** ★ Nonlinear physical phenomena. 91i:00022

**Phoenix, AZ** ★ Mathematics of nonlinear science. 91e:00026

**Problems in geometry** ★ Проблемы геометрии. Том 22. (Russian) [Problems in geometry.

Vol. 22] 91k:53004

**Proceedings:**

**Conference on Bifurcation Theory and its Numerical Analysis** ★ Proceedings of the

International Conference on Bifurcation Theory and its Numerical Analysis.

91b:00048

**International Centre of Condensed Matter Physics School on Nonlinear Physical**

**Phenomena** ★ Nonlinear physical phenomena. 91i:00022

**Providence, RI** ★ Chaos and fractals. 91a:58130

**School:**

**Nonlinear Physical Phenomena** ★ Nonlinear physical phenomena. 91i:00022

**Seminar:**

**Geometry** ★ Travaux du Séminaire Sud-Rhodanien de Géométrie. I. (French) [Papers of

the South-Rhône Geometry Seminar. I.] 91e:58065

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**Global Geometry and Mathematical Physics** ★ Global geometry and mathematical

physics. 91h:00028

**Mathematics of Nonlinear Science** ★ Mathematics of nonlinear science. 91e:00026

**Workshop:**

**Differential Geometry, Calculus of Variations, and Computer Graphics** ★ Geometric

analysis and computer graphics. 91g:00045

**Xi'an** ★ Proceedings of the International Conference on Bifurcation Theory and its

Numerical Analysis. 91b:00048

## 58Axx General theory of differentiable manifolds

### 58A05 Differentiable manifolds, foundations

**Mikusiński, Włodzimierz M.** Natural transformations of Weil functors into bundle functors.

91i:58004

**Items with secondary classifications in 58A05**

**Łosik, M. V.** A certain generalization of a manifold and its characteristic classes. 91j:58179

### 58A07 Real-analytic and Nash manifolds [see also 14P20, 32C07]

**Beretta, Lucia** (with Tognoli, Alberto) Nash sets and global equations. (Italian summary)

91h:58001

**Tognoli, Alberto** see Beretta, Lucia, 91h:58001

**Items with secondary classifications in 58A07**

**Coste, Michel** Sous-ensembles algébriques réels de codimension 2. [Real algebraic subsets

of codimension 2] 91c:14069

**Jeanquartier, Pierre** Intégration sur les fibres d'une fonction analytique. [Integration of an

analytic function over the fibers] 91c:58004

**Kuchars, Wojciech** Global almost analytic algebraicity of analytic sets. 91c:14068

**Paźwicki, Wiesław** Points de Nash des ensembles sous-analytiques. (English summary)

[Nash points of subanalytic sets] 91a:32009

### 58A10 Differential forms

**Anné, Colette** Principe de Dirichlet pour les formes différentielles. (English summary) [The

Dirichlet principle for differential forms] 91d:58001

**Ayassou, E. Kemigan** Sur la  $D_2$ -cohomologie. [On  $D_2$ -cohomology] 91f:58003

**Carbol, Jaroslav** (with Vanžura, Jiří) Derivations on the algebra of differential forms of

infinite order on a manifold. (Russian and Czech summaries) 91d:58002

**Harris, Bruno** Differential characters and the Abel-Jacobi map. 91c:58001

**Jones, John D. S.** (with Petrack, S. B.) The fixed point theorem in equivariant cohomology.

91b:58002

**Kulpa, W.** An integral theorem and its applications to coincidence theorems. 91b:58003

**Li, Quan Sheng** The first degree differential operator  $\delta$  and  $\sum_j i(E_j)\nabla_{E_j}$ . (Chinese. English

summary) (Not in MR)

**Meziani, A.** On the integrals of a singular real analytic differential form in  $\mathbb{R}^n$ . 91a:58003

**Olver, Peter J.** Classical invariant theory and the equivalence problem for particle

Lagrangians. I. Binary forms. 91c:58002

**Petrack, S. B.** see Jones, John D. S., 91b:58002

**Plunkin, S. A.** Differential forms of finite codegree and the Stokes formula in locally

convex spaces. 91d:58003

**Rumin, Michel** Un complexe de formes différentielles sur les variétés de contact. (English

summary) [A complex of differential forms on contact manifolds] 91a:58004

**Vanžura, Jiří** see Carbol, Jaroslav, 91d:58002

**Wald, Robert M.** On identically closed forms locally constructed from a field. 91g:58001

**Items with secondary classifications in 58A10**

**Anné, Colette** Principe de Dirichlet pour les formes différentielles. [The Dirichlet principle

for differential forms] 91d:58007

**Arraut, J. L.** (with Moreira dos Santos, Nathan) Actions of cylinders. 91g:57027

**Blits, Gr.** Operators and Maxwell equations in semi-Riemannian manifolds with torsion.

91a:53087

**Bott, Raoul H.** (with Tu, Loring W.) ★ Дифференциальные формы в алгебраической

топологии. (Russian) [Differential forms in algebraic topology] 91j:57001

**Boukraa, Salah** (with Nijhoff, F. W.; Maillet, Jean-Michel) On a generalization of BRS and

gauge transformations. 91c:17011

**Cap, Andreas** All linear and bilinear natural concomitants of vector valued differential

forms. 91i:53032

**Crumeyrolle, Albert** ★ Orthogonal and symplectic Clifford algebras. 91a:53028

**Gal'perin, A. S.** (with Ogievetskii, O. V.) Extended supersymmetries in topological Yang-

Mills theory. 91c:57035

**Ganczarczyk, Jacek** (with Mahi, Salima) Lifts of 1-forms to the tangent bundle of higher

order. 91j:58008

**Gasqui, Jacques** (with Goldschmidt, Hubert) Critère d'exactitude pour les formes de degré

1 sur les quadriques complexes. (English summary) [Criterion of exactness for 1-forms on

complex quadrics] 91d:53097

**Goldschmidt, Hubert** see Gasqui, Jacques, 91d:53097

**Jeong, Gwon-Soo** A study on the iterated integrals of differential forms. 91m:58005

**Khenkin, G. M.** see Novikov, R. G., 91c:32028

**Kirillov, A. A.** see Bott, Raoul H., 91j:57001

**Kosmann-Schwarzbach, Yvette** (with Magri, Franco) Dualization and deformation of Lie

brackets on Poisson manifolds. (see 91b:53002)

**Lehmans, Daniel** Théorie homotopique des formes différentielles (d'après D. Sullivan).

(English summary) [Homotopy theory of differential forms (following D. Sullivan)]

91k:55013

**Lu, Qi Keng** The Green forms and the Cauchy formulas on a Kähler manifold. (Chinese

summary) 91b:32014

**L'vov, I. V.** (with Sharafutdinov, V. A.) The tangential component of a tensor field.

91b:58006

**Magri, Franco** see Kosmann-Schwarzbach, Yvette, (91b:53002)

**Mahi, Salima** see Ganczarczyk, Jacek, 91j:58008

**Maillet, Jean-Michel** see Boukraa, Salah; et al., 91c:17011

**Meyer, Paul-André** Qu'est ce qu'une différentielle d'ordre  $n$ ? (English summary) [What is

an  $n$ th-order differential?] 91d:60125

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- Gołdštejn, V. M. (with Kur'minov, V. I.; Shvedov, I. A.)  $L_p$ -cohomology of noncompact Riemannian manifolds. **91a:58005**
- Jeong, Gwon-Soo A study on the iterated integrals of differential forms. **91m:58005**
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- (Busyat'skaya, I. K.) see Bott, Raoul H., **91k:22001**
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- Forman, Robin Difference operators, covering spaces and determinants. **91a:57012**
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- Lehmann, Daniel Classes caractéristiques résiduelles. (English summary) [Residual characteristic classes] **91e:70043**
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**58A15 Exterior differential systems (Cartan theory)**

- Bigolin, Bruno (with Perelli Cippo, Claudio) Drapeaux intégraux ordinaires d'un système différentiel extérieur. I. (Polish summary) [Ordinary integral flags of an exterior differential system. I] **91e:58007a**
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- Gardner, Robert B. ★ The method of equivalence and its applications. **91j:58007**
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- Gardner, Robert B. (with Shadwick, W. F.; Wilkens, G. R.) Feedback equivalence and symmetries of Brunovsky normal forms. **91a:93012**
- Grigor'ev, D. Yu. The complexity of computing the genus of a system of exterior differential equations. **91e:14051**
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- Polyakova, N. S. The Frobenius theorem for a class of locally convex spaces. **91a:58021**
- Rabeio, Mauro L. On equations which describe pseudospherical surfaces. **91a:58088**
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- Zhang, De Gang (with Yang, Guo Xiang) Integrable deformations of the classical Heisenberg model. **91g:58137**

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- Goze, Michel Systèmes de Pfaff associés aux algèbres de Lie de type  $H$ . [Pfaffian systems associated with Lie algebras of type  $H$ ] **91k:58006**
- Grude, É. I. On the structure of the solutions of a periodic Pfaffian system with two purely imaginary roots in the characteristic equation. **91i:58009**
- Hara, Masaki (with Sasaki, Takeshi; Yoshida, Masaaki) Tensor products of linear differential equations—a study of exterior products of hypergeometric equations. **91e:58010**
- Kaklé, Kuni Existence of  $C^\infty$  integral manifolds of an involutive Pfaffian system. **91i:58010**
- Lasyl, P. G. Almost reducible triangular completely integrable Pfaffian systems. (Russian. English summary) **91d:58005**
- Lychagin, V. V. (with Romanovskii, Yu. R.) Nonholonomic intermediate integrals of partial differential equations. **91e:58011**
- Rabstevich, V. I. Reducibility of Pfaffian differential equations with periodic coefficients. (Russian) (see **91b:00036**)
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- Kimura, Hirokazu Symmetries of the Garnier system and of the associated polynomial Hamiltonian system. **91j:58060**
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- Malevich, A. É. The existence of periodic orbits of autonomous completely integrable Pfaffian equations. (Russian) (see **91b:00036**)
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- Chrastina, Jan On formal theory of differential equations. II. (Russian and Czech summaries) **91e:58009a**
- Dekrét, Anton Vector fields and connections on  $TM$ . (Russian and Slovak summaries) **91m:53016**
- Egorchenko, I. A. Differential invariants of Euclidean algebra. **91g:58300**
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- Ferraris, Marco (with Francaviglia, Mauro; Tubiello, Francesco) Connections over the bundle of second-order frames. **91g:53028**
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## 58A25 Currents [see also 32C30, 53C65]

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- see also Vershik, A. M., **91a:58012**
- Vershik, A. M. (with Gershkovich, V. Ya.) A bundle of nilpotent Lie algebras over a nonholonomic manifold (nilpotentization). (Russian. English summary) **91a:58012**
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- Amici, Oriella (with Casciaro, Biagio) On the conservation laws of the Einstein equations on Lagrange spaces. **91h:53028**
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- García Pérez, Pedro L. Differential invariants of  $G$ -structures. (Spanish. English summary) **91d:53038**
- Grasse, Kevin A. Invariant distributions, global decompositions of nonlinear systems, and applications. **91d:53022**
- Hangan, Th. Sur la courbure totale d'intégrabilité d'un espace riemannien non holonome compact. (English summary) [On the total curvature of integrability of a compact nonholonomic Riemannian space] **91a:53057**
- Hermann, Robert Nonlinear feedback control and systems of partial differential equations. **91f:58004**
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- Morimoto, Toku Un critère pour l'existence d'une connexion de Cartan. (English summary) [A criterion for the existence of a Cartan connection] **91h:53030**
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- Ivanov, A. O. (with Tuzhilin, Avgustin Alexey) Deformation of a manifold that decreases volume at maximum rate. **91h:58039**
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# 58A50 Supermanifolds and graded manifolds [see also 14A22, 32C11]

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 Yau, Stephen S.-T. Topological type of isolated hypersurface singularities. 91c:32029  
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- Singularities ★ Singularities. 91k:58004  
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- Arnold, V. I. ★ Теория катастроф. (Russian) [Catastrophe theory] 91h:58013



- Berry, M. V. (with Howls, C. J.) Stokes surfaces of diffraction catastrophes with codimension three. 91h:58011
- Chynoweth, S. (with Sewell, M. J.) Mesh duality and Legendre duality. 91e:58023
- Howls, C. J. *see* Berry, M. V., 91h:58011
- Kazarian, A. V. Metamorphoses of contact points of a hyperplane and a hypersurface. (French summary) 91j:58027
- Kuyk, Willem (with Smits, Lieven) On the geometries of the rational unfoldings of  $X^k$ . 91m:58017
- (with Smits, Lieven) Rational unfoldings of  $\pm X^k$  and their relation with geometric equilibrium theory. 91m:58018
- Miller, Thomas ★ Verallgemeinerte Airyfunktionen. (German) [Generalized Airy functions] 91e:58013
- Rong, Min Zhe (with Wang, Qi Ping) Catastrophe models of direction reverse of material transfer and arc transition between materials in electrical contact. (Chinese. English summary) (Not in MR)
- Sewell, M. J. *see* Chynoweth, S., 91e:58023
- Smits, Lieven *see* Kuyk, Willem, 91m:58017 and 91m:58018
- Wang, Qi Ping *see* Rong, Min Zhe, (Not in MR)
- Items with secondary classifications in 58C28
- Abad, A. (with Deprit, André; Elise Sánchez, Antonio C.; Sein-Echaluce, M. L.) A perturbed elliptic oscillator: flow inversion through butterfly bifurcations. 91d:58065
- de Aguiar, Marcus A. M. *see* Osorio de Almeida, Alfredo M., 91h:58090
- Anishchikov, E. M. (with Kondrashkov, V. V.) Application of catastrophe theory to the study of the structural stability of seismic structures. (Russian) 91g:86007
- Bates, Larry M. An extension of Lagrange multipliers. 91b:58018
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- Bruce, J. W. Geometry of singular sets. 91e:58019
- Cao, Sheng Lin The catastrophe changes in the theory of relativity. 91d:83004
- Carpinteri, Alberto A catastrophe theory approach to fracture mechanics. 91d:73052
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- Danesh-Narue, G. *see* Chillingworth, David R.; et al., 91d:58019
- Deakin, Michael A. B. The uniqueness of unfoldings. 91d:58020
- Deprit, André *see* Abad, A.; et al., 91d:58065
- Elise Sánchez, Antonio C. *see* Abad, A.; et al., 91d:58065
- Galte, J. A. Phase transitions as catastrophes: the tricritical point. 91j:82022
- (Gol'dia, S. V.) *see* Anishchikov, E. M., 91g:86007
- Hunter, John K. Caustics of nonlinear waves. 91b:58020
- Jetschke, Gottfried ★ Mathematik der Selbstorganisation. (German) [Mathematics of self-organization] 91g:58259
- Jumarie, Guy Systems, catastrophe, chaos, synergetics. A unified approach via information of deterministic functions. 91d:94007
- Khesin, B. A. Bifurcations of gradient dynamical systems. (Russian) 91g:58205
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- Lerche, Wolfgang (with Vafa, Cumrun; Warner, Nicholas P.) Chiral rings in  $N = 2$  superconformal theories. 91d:81132
- Marzban, Caren Remarks on the Landau-Ginzburg potential and RG flow for  $SU(2)$ -coset models. 91d:81086
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- Osorio de Almeida, Alfredo M. (with de Aguiar, Marcus A. M.) Periodic librations and their effect on the quantum energy spectrum. 91h:58090
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- Erratum: "Description of phenomenological models of phase transitions by catastrophe theory methods". 91k:82031b
- Sein-Echaluce, M. L. *see* Abad, A.; et al., 91d:58065
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- Vafa, Cumrun *see* Lerche, Wolfgang; et al., 91d:81132
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- Wei, De Min *see* Shen, Mao Shan, 91k:73068
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- Aubin, Jean-Pierre A survey of viability theory. 91e:49005
- Bartsch, Thomas Bifurcation theory for metric parameter spaces. 91a:58046
- Benjamin, T. Brooke (with Bona, J. L.; Bose, D. K.) Solitary-wave solutions of nonlinear problems. 91b:35309
- Bona, J. L. *see* Benjamin, T. Brooke; et al., 91b:35309
- Bose, D. K. *see* Benjamin, T. Brooke; et al., 91b:35309
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- Chen, Yu Qing *see* Zhang, Shi Sheng, 91h:47065
- Cloranescu, Ioana ★ Geometry of Banach spaces, duality mappings and nonlinear problems. 91m:46021
- Curry, James H. On zero finding methods of higher order from data at one point. 91a:65134
- Dai, Rui-Xiu (with Rheinboldt, Werner C.) On the computation of manifolds of foldpoints for parameter-dependent problems. 91e:65073
- Del Pino, Manuel A. (with Elgueta, Manuel; Manásevich, Raúl F.) A homotopic deformation along  $p$  of a Leray-Schauder degree result and existence for  $(|u'|^{p-2}u')' + f(t, u) = 0$ ,  $u(0) = u(T) = 0$ ,  $p > 1$ . 91j:34018
- Elgueta, Manuel *see* Del Pino, Manuel A.; et al., 91j:34018
- Fitzpatrick, Patrick M. (with Pejsachowicz, Jacobo; Rabier, Patrick J.) Topological degree for nonlinear Fredholm operators. (French summary) 91m:47091
- Gao, Tang An A condition for existence of zeroes of combinatorial mappings. (Chinese. English summary) (Not in MR)
- Geanakoplos, John (with Shafer, Wayne J.) Solving systems of simultaneous equations in economics. 91g:90038
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- Gliklikh, Yu. E. Velocity hodograph equation in mechanics on Riemannian manifolds. 91i:58103
- Greene, Robert E. *see* Brown, Robert Freeman; et al., 91a:55001
- Irmator, A. A. Topology of the space of Fredholm operators and invariants of nonlinear Fredholm mappings. 91e:58015
- Kolov, Boris Point fixe lié à une orbite périodique d'un difféomorphisme de  $\mathbb{R}^2$ . (English summary) [A fixed point linked with a periodic orbit of a diffeomorphism of  $\mathbb{R}^2$ ] 91j:55002
- Kryszewski, Wojciech An approximation method in the theory of nonlinear noncompact operators. 91i:47077
- Kuczumow, Tadeusz (with Stachura, Adam) Iterates of holomorphic and  $k_D$ -nonexpansive mappings in convex domains in  $\mathbb{C}^n$ . 91d:32037
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- Libgober, Anatoly S. On topological complexity of solving polynomial equations of special type. 91h:65076
- Manásevich, Raúl F. *see* Del Pino, Manuel A.; et al., 91j:34018
- Matsuoka, Takashi<sup>1</sup> (with Shiraki, Hisao) Smooth maps with finitely many periodic points. 91g:58222
- Meray, Parol On the existence of a solution of  $F(x) = 0$  in some compact sets. (Russian summary) 91d:65073
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- Some remarks on the foundations of numerical analysis. 91k:00007
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- (Traub, Joseph F.) *see* Smale, Stephen, 91j:65091
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- Wang, Ze Ke On the basic theory of the vector-labelled simplicial algorithm—some opinions concerning the book *Numerical solution methods for systems of nonlinear equations* (Chinese) [Science Press, Beijing, 1987] by Q. Y. Li, Z. Z. Mo and L. Q. Qi.

### 58C30 Fixed point theorems on manifolds[see also 47H10]

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- Bonnissieu, Jean-Marc (with Cornet, Bernard) Fixed-point theorems and Morse's lemma for Lipschitzian functions. 91e:58014
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- Brown, Robert Freeman Nielsen fixed point theory and parametrized differential equations. 91a:58033
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- Górniewicz, Lech *see* Bielawski, Roger, 91h:58012
- Mirzakhanyan, E. A. Infinite-dimensional analogues of Borsuk theorems on the oddness of the degree of an odd mapping and on a fixed point. (Russian. Armenian summary) 91g:58032
- Pavel, Nicolae H. Zeros of Bouligand-Nagumo fields, flow-invariance and the Brouwer fixed point theorem. 91d:58025
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- (Chinese. English summary) 91j:65093  
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### 58C35 Integration on manifolds; measures on manifolds [see also 28Cxx]

- Arnol'd, V. I. Dynamics of intersections. 91f:58010  
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- Items with secondary classifications in 58C35
- Fujii, Kazuyuki (with Tanaka, Masaru) Universal Schwinger cocycles of current algebras in  $(D+1)$  dimensions: geometry and physics. 91e:58207  
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- Items with secondary classifications in 58C40
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### 58C50 Analysis on supermanifolds or graded manifolds

- Billionnet, Claude On super (or pseudo) differential forms as superfunctions. (French summary) 91d:58026  
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- Items with secondary classifications in 58C50
- Abramov, Viktor Anatolevich Geometry of BRST-formalism. 91d:81145

- Bartocci, Claudio (with Bruzzo, Ugo; Landi, Giovanni) Geometry of standard constraints and Weil triviality in supersymmetric gauge theories. 91f:81204  
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### 58C99 None of the above, but in this section

- Items with secondary classifications in 58C99
- Breuer, H. P. (with Dietz, Klaus P.; Holthaus, M.) Transport of quantum states of periodically driven systems. 91h:82034  
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 Fitzpatrick, Patrick M. (with Pejsachowicz, Jacobo) Parity and generalized multiplicity. 91j:58038  
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 Janas, Jan Toeplitz operators on Fock spaces. 91g:47019  
 Knyazishche, L. B. On conditions for the asymptotic stability of nonautonomous completely integrable equations. (Russian) 91a:34036  
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### 58Dxx Spaces and manifolds of mappings (including nonlinear versions of 46Exx)

#### 58D05 Groups of diffeomorphisms and homeomorphisms as manifolds [see also 22E65, 57S05]

- Cap, Clemens H. Two approaches to the iteration problem of diffeomorphisms. 91k:58015  
 Cervera, Vicente (with Mascaró, Francisca) Some results on the normal subgroups of  $\text{Diff}^2(X \times \mathbb{R}^+, \text{rel } X \times \{0\})$ . 91d:58027  
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#### Items with secondary classifications in 58D05

- Balachandran, A. P. (with Jo, S.-G.; Srivastava, A. M.) What becomes of the vacuum angle in generally covariant gauge theories and the vielbein approach to gravity. 91h:81083  
 Bars, Itzhak Membrane symmetries and anomalies. 91k:81182

- Bergshoeff, E. A. (with Blencowe, M. P.; Stelle, K. S.) Area-preserving diffeomorphisms and higher-spin algebras. **91j:17039**
- Blencowe, M. P. see Bergshoeff, E. A.; et al., **91j:17039**
- Cervera, Vicente (with Mascaró, Francisco; Sivera, Rafael) On volume elements on a noncompact manifold. **91d:58028**
- Dunato, Paul Géométrie des orbites coadjointes des groupes de difféomorphismes. [Geometry of the coadjoint orbits of diffeomorphism groups] **91g:58093**
- Frappat, L. (with Ragoucy, E.; Sorba, P.; Thuillier, F.; Hoglsen, H.) Generalized Kac-Moody algebras and the diffeomorphism group of a closed surface. **91m:17038**
- Glaquinta, Mariano (with Modica, Giuseppe; Souček, Jiří) Erratum and addendum to: "Cartesian currents, weak diffeomorphisms and existence theorems in nonlinear elasticity" [Arch. Rational Mech. Anal. **106** (1989), no. 2, 97-159; MR 90c:58044]. **91b:58050**
- Hoglsen, H. see Frappat, L.; et al., **91m:17038**
- Jekel, Solomon M. On the second homology group of the discrete group of diffeomorphisms of the circle. **91a:20058**
- Jo, S.-G. see Balachandran, A. P.; et al., **91b:81083**
- Lorentz, Kai On the local structure of the similarity orbits of Jordan elements in operator algebras. **91b:47102**
- Marquard, U. see de Wit, B.; et al., **91c:81089**
- Mascaró, Francisco see Cervera, Vicente; et al., **91d:58028**
- Modica, Giuseppe see Glaquinta, Mariano; et al., **91b:58050**
- Nicolai, H. see de Wit, B.; et al., **91c:81089**
- Pastı, P. (with Tonin, M.; Wu, Ke) The curvature of line bundle over  $\text{diff } S^1/S^1$  and  $\text{superdiff } S^1/S^1$ . **91b:58266**
- Pope, C. N. (with Stelle, K. S.)  $SU(\infty)$ ,  $SU_\infty(\infty)$  and area-preserving algebras. **91c:17016**
- Ragoucy, E. see Frappat, L.; et al., **91m:17038**
- Ramos, Eduardo (with Sah, Chih-Han; Shrock, R. E.) Algebras of diffeomorphisms of the  $N$ -torus. **91j:17043**
- Sah, Chih-Han see Ramos, Eduardo; et al., **91j:17043**
- Sakai, Katsuro An embedding space triple of the unit interval into a graph and its bundle structure. **91g:57017**
- Schwartz, Laurent Équation différentielle stochastique (EDS) sur  $\mathbb{R}^N$  et sur  $\mathbb{R}^N \cup \{\infty\} = S_N$ . (English summary) [A stochastic differential equation in  $\mathbb{R}^N$  and  $\mathbb{R}^N \cup \{\infty\} = S_N$ ] **91a:60158**
- Shrock, R. E. see Ramos, Eduardo; et al., **91j:17043**
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- Šťovíček, P. Quantization and systems of imprimitivity for the group of diffeomorphisms. **91g:22028**
- Thuillier, F. see Frappat, L.; et al., **91m:17038**
- Todorov, Ivan T. Finite temperature 2-dimensional QFT models of conformal current algebra. **91a:81082**
- Tonin, M. see Pastı, P.; et al., **91b:58266**
- Viterbo, Claude Capacités symplectiques et applications (d'après Ekeland-Hofer, Gromov). [Symplectic capacities and applications (after Ekeland-Hofer, Gromov)] **91m:58069**
- de Wit, B. (with Marquard, U.; Nicolai, H.) Area-preserving diffeomorphisms and supermembrane Lorentz invariance. **91c:81089**
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- Zoller, D. Cocycles, the descent equations, and the Virasoro algebra. **91j:22015**

## 58D07 Groups and semigroups of nonlinear operators [see also 17B65, 47D03, 47D06, 47H20]

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- Ladyzhenskaya, O. A. Attractors for second-order quasilinear parabolic equations of general form. (Russian. English summary) **91h:35153**
- Some additions and refinements to my papers on the theory of attractors for abstract semigroups. (Russian. English summary) **91m:47100**
- Prikrat-skil, A. K. see Pritula, N. N., **91h:58057**
- Pritula, N. N. (with Prikrat-skil, A. K.) The Banach group of Lie flows  $\mathcal{L} \times \text{Diff}(S^1)$  on the circle  $S^1$  as the invariance group of stochastic nonlinear Korteweg-de Vries equations. (Russian) **91k:58057**
- Suchanecki, Zdzisław (with Weron, Aleksander) Applications of an operator stochastic integral in Prigogine's theory of irreversible dynamical systems. **91a:47057**
- Weron, Aleksander see Suchanecki, Zdzisław, **91a:47057**

## 58D10 Spaces of imbeddings and immersions

- Blinz, E. Natural Hamiltonian systems on spaces of embeddings. **91e:58027**
- On the notion of the stress tensor associated with  $\mathbb{R}^n$ -invariant constitutive laws admitting integral representations. **91m:58019**
- Cervera, Vicente (with Mascaró, Francisco; Sivera, Rafael) On volume elements on a noncompact manifold. **91d:58028**
- Mascaró, Francisco see Cervera, Vicente; et al., **91d:58028**
- Shapiro, B. Z. (with Shapiro, M. Z.) On the number of connected components in the space of closed nondegenerate curves on  $S^n$ . **91j:58028**
- Shapiro, M. Z. see Shapiro, B. Z., **91j:58028**
- Sivera, Rafael see Cervera, Vicente; et al., **91d:58028**
- Stoyanov, Luchezar N. A bumpy metric theorem and the Poisson relation for generic strictly convex domains. **91i:58021**
- Wegenkittl, K. The space of isometric immersions is no manifold in general. **91b:58025**

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- (Cheeger, Jeff) see Gromov, Mikhael L., **91c:53034**
- Carlette, Kevin Immersions with bounded curvature. **91e:53062**

- Gromov, Mikhael L. ©Soft and hard symplectic geometry. **91c:53034**
- Nakachi, Nobumitsu Compactness of the space of incompressible stable minimal surfaces without boundary. **91m:58031**
- Tóth, Gábor ★ Harmonic maps and minimal immersions through representation theory. **91a:58050**

## 58D15 Manifolds of mappings [see also 54C35]

- Bethuel, Fabrice A characterization of maps in  $H^1(B^3, S^2)$  which can be approximated by smooth maps. (French summary) **91f:58013**
- Cho, Yong Seung Finite group actions on the moduli space. **91d:58029**
- Finite group actions on the moduli space of self-dual connections. I. **91d:58030**
- Donaldson, Simon K. Compactification and completion of Yang-Mills moduli spaces. **91a:58037**
- Eichhorn, Jürgen The invariance of Sobolev spaces over noncompact manifolds. (see **91m:35005**)
- Manifolds of mappings between open manifolds. **91j:58029**
- Hélein, Frédéric Approximations of Sobolev maps between an open set and an Euclidean sphere, boundary data, and singularities. **91c:58028**
- Koiso, Norihito On the complex structure of a manifold of sections. **91i:58022**
- Nakamoto, Takao Three Liemannian metrics on the moduli space of BPST-instantons over  $S^4$ . **91a:58038**
- Wegenkittl, K. Many function-spaces are not normal if the domain is not compact. **91b:58026**

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- Bejarski, B. Geometric properties of the Sobolev mapping. **91g:46034**
- Demengel, Françoise Une caractérisation des applications de  $W^{1,p}(B^N, S^1)$  qui peuvent être approchées par des fonctions régulières. (English summary) [A characterization of maps in  $W^{1,p}(B^N, S^1)$  that can be approximated by smooth maps] **91f:46044**
- Glaquinta, Mariano (with Modica, Giuseppe; Souček, Jiří) Cartesian currents and variational problems for mappings into spheres. **91f:49053**
- Jeong, Gwon-Soo A study on the iterated integrals of differential forms. **91m:58005**
- Kriegl, A. (with Michor, Peter W.; Schachermayer, W.) Characters on algebras of smooth functions. **91b:46046**
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- Nakamura, Yoshimasa Moduli space of  $SU(2)$  monopoles and complex cyclic-Toda hierarchy. **91g:58040**
- Saka, Kōichi Besov spaces on Riemannian manifolds and its application to  $L_p$ - $L_q$  estimates for wave equations. **91b:58254**
- Sakai, Katsuro An embedding space triple of the unit interval into a graph and its bundle structure. **91g:57017**
- Schachermayer, W. see Kriegl, A.; et al., **91b:46046**
- Skrzypczak, Leszek Traces of function spaces of  $F_{p,q}^s - B_{p,q}^s$  type on submanifolds. **91j:46044**
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- Tromba, A. J. A classical variational approach to Teichmüller theory. **91a:32029**
- Vasil'ev, V. A. Topology of spaces of functions without complex singularities. **91c:58011**
- Wilkins, D. R. Slice theorems in gauge theory. **91c:58015**

## 58D17 Manifolds of metrics (esp. Riemannian)

- Andersson, Lars Åke On the space of asymptotically flat solutions of Einstein's equations. **91d:58031**
- Blair, David E. The isolatedness of special metrics. **91e:58029**
- Freed, Daniel S. (with Groisser, David) The basic geometry of the manifold of Riemannian metrics and of its quotient by the diffeomorphism group. **91a:58039**
- Groisser, David see Freed, Daniel S., **91a:58039**
- Schmidt, Hans-Jürgen The metric in the superspace of Riemannian metrics and its relation to gravity. **91g:58038**

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- Aneziris, C. (with Balachandran, A. P.; Bourdeau, Michelle Hilda; Jo, S.-G.; Ramadas, T. R.; Sorkin, R. D.) Statistics and general relativity. **91h:83040**
- Balachandran, A. P. see Aneziris, C.; et al., **91h:83040**
- Bourdeau, Michelle Hilda see Aneziris, C.; et al., **91h:83040**
- Gao, L. Zhiyong Einstein metrics. **91d:58036**
- Jo, S.-G. see Aneziris, C.; et al., **91h:83040**
- Kapovich, M. É. Deformation spaces of flat conformal structures. **91a:57019**
- Moncrief, Vincent Reduction of the Einstein equations in 2 + 1 dimensions to a Hamiltonian system over Teichmüller space. **91d:58032**
- Ramadas, T. R. see Aneziris, C.; et al., **91h:83040**
- Sorkin, R. D. see Aneziris, C.; et al., **91h:83040**
- Torre, Charles G. Perturbations of gravitational instantons. **91h:83047**
- Tromba, A. J. A classical variational approach to Teichmüller theory. **91a:32029**

## 58D19 Group actions and symmetry properties

- Moncrief, Vincent Reduction of the Einstein equations in 2 + 1 dimensions to a Hamiltonian system over Teichmüller space. **91d:58032**
- Wilkins, D. R. Slice theorems in gauge theory. **91c:58015**

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- Marion, Jean Albert Energy machineries on a manifold; application to the construction of new energy representations of gauge groups. **91h:22037**



### 58D20 Measures (Gaussian, cylindrical, etc.) on manifolds of maps [See 28Cxx]

- Albeverio, Sergio (with Cruzeiro, Ana Bela) Global flows with invariant (Gibbs) measures for Euler and Navier-Stokes two-dimensional fluids. 91j:58030
- Bogachev, V. I. Differential properties of measures on infinite-dimensional spaces and the Malliavin calculus. 91m:58020
- Cruzeiro, Ana Bela see Albeverio, Sergio, 91j:58030
- Items with secondary classifications in 58D20
- Brummelhuis, R. G. M. A microlocal F. and M. Riesz theorem with applications. 91e:42031
- Malliavin, Paul see Malliavin-Brammeret, Marie-Paule, 91k:60084
- Malliavin-Brammeret, Marie-Paule (with Malliavin, Paul) Integration on loop groups. I. Quasi invariant measures. 91k:60084
- Short, K. M. Polyakov string in variable dimensions. 91m:81224

### 58D25 Equations in function spaces; evolution equations [see also 34Gxx, 35K22, 35R15, 47H15]

- Abdelouhab, L. (with Bona, J. L.; Felland, M.; Saut, Jean-Claude) Nonlocal models for nonlinear, dispersive waves. 91d:58033
- Antonevich, A. B. (with Dang Khan' Khoi) Periodic solutions of some inhomogeneous evolution differential equations on Riemannian manifolds. 91b:58028
- Babin, A. V. (with Vishik, M. I.) Uniform finite-parameter asymptotics of solutions of nonlinear evolutionary equations. 91d:58034
- Bona, J. L. see Abdelouhab, L.; et al., 91d:58033
- Butsan, G. P. (with Daletskii, Yu. L.; Zgurovskii, M. Z.) Multiplicative methods in the theory of stochastic evolution systems. (Russian) 91k:58016
- Constantin, Peter A construction of inertial manifolds. 91a:58040
- Daletskii, Yu. L. see Butsan, G. P.; et al., 91k:58016
- Dang Khan' Khoi (with Pham Ngoc Thao) Periodic solutions of evolution systems of natural equations on Riemannian manifolds. I. (Russian) 91b:58027
- see also Antonevich, A. B., 91b:58028
- Felland, M. see Abdelouhab, L.; et al., 91d:58033
- Gliklikh, Yu. E. ★ Анализ на римановых многообразиях и задачи математической физики. (Russian) [Analysis on Riemannian manifolds and problems in mathematical physics] 91j:58031
- Inoue, Atsushi On functional-differential equations—a recommendation for analysis on function space. Congratulations to Professor Masao Kato on his seventieth birthday. (Japanese) 91i:58023
- (Kato, Masao) see Inoue, Atsushi, 91i:58023
- Marino, Antonio (with Saccon, Claudio; Tosques, Mario) Curves of maximal slope and parabolic variational inequalities on nonconvex constraints. 91d:58035
- Pham Ngoc Thao see Dang Khan' Khoi, 91b:58027
- Saccon, Claudio see Marino, Antonio; et al., 91d:58035
- Saut, Jean-Claude see Abdelouhab, L.; et al., 91d:58033
- Świerczyński, Z. Erratum: "On the Cauchy problem for Yang-Mills equations with external current" [J. Math. Phys. 30 (1989), no. 8, 1699–1706; MR 90j:58023]. 91f:58014
- Tosques, Mario see Marino, Antonio; et al., 91d:58035
- Vishik, M. I. see Babin, A. V., 91d:58034
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- Aratyn, Henrik (with Nissimov, E.; Pacheva, S.; Zimmerman, A. H.) The Noether theorem for geometric actions and area preserving diffeomorphisms on the torus. 91j:58054
- van Beekun, F. P. H. see van Groesen, E.; et al., 91k:58117
- Belopol'skaya, Ya. I. Parabolic equations in principal and associated bundles. (Russian) 91c:58209
- Broadbridge, P. Selection of solvable nonlinear evolution equations by systematic searches for Lie-Bäcklund symmetries. (see 91f:58001)
- Das, Sumit R. (with Mandal, Gautam; Wadia, Spenta R.) Stochastic differential equations on two-dimensional theory space and Morse theory. 91a:81141
- Dawidowicz, Antoni Leon On the positivity of an invariant measure on open nonempty sets. 91c:58093
- Debussche, Armand Inertial manifolds and Sacker's equation. 91c:34087
- Ebel, Witta (with de Mottoni, Piero) On some normalized evolution equations. 91c:35061
- Eden, Alp (with Libin, A.) Explicit dimension estimates of attractors for the MHD equations in three-dimensional space. 91b:58232
- (with Foias, Ciprian; Nicolaenko, Basil; Temam, Roger) Ensembles inertiels pour des équations d'évolution dissipatives. (English summary) [Inertial sets for dissipative evolution equations] 91b:58233
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- Filatov, A. N. see Ifin, A. A., 91f:76020
- Foias, Ciprian see Eden, Alp; et al., 91b:58233
- van Groesen, E. (with van Beekun, F. P. H.; Valkering, T. P.) Decay of travelling waves in dissipative Poisson systems. 91k:58117
- Hale, Jack K. Shadow systems for evolutionary equations. 91a:58109
- Ifin, A. A. (with Filatov, A. N.) Stability of stationary solutions of equations of a barotropic atmosphere with respect to linear approximation. 91f:76020
- Navier-Stokes and Euler equations on two-dimensional closed manifolds. 91f:35210
- Ilyashenko, Ya. S. Global analysis of the phase portrait of a nonlinear parabolic evolution equation. (Russian) 91m:35108
- Kamaev, D. A. Splitting of homoclinic trajectories of infinite-dimensional evolution equations under the action of periodic perturbations. 91c:58123
- Kapitanik, L. V. (with Kostin, I. N.) Attractors of nonlinear evolution equations and their approximations. 91b:58133
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- Kostin, I. N. see Kapitanik, L. V., 91b:58133
- Kozono, Hideo see Naito, Hisashi; et al., 91b:58041 and 91b:58042

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- Libin, A. see Eden, Alp, 91b:58232
- Ma, Fu Ming Centre manifold and numerical solution of nonlinear differential equations. 91h:65119
- Maeda, Yoshiaki see Naito, Hisashi; et al., 91b:58041 and 91b:58042
- Malec, Edward (with Koc, Piotr) Trapped surfaces in monopole-like Cauchy data of Einstein-Yang-Mills-Higgs equations. 91b:83011
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- McLaughlin, David W. see Terrones, Guillermo; et al., 91c:58100
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- Nadirašvili, N. S. On the dynamics of nonlinear parabolic equations. (Russian) 91h:35121
- Naito, Hisashi (with Kozono, Hideo; Maeda, Yoshiaki) Asymptotic behavior of the Yang-Mills gradient flow. 91b:58041
- (with Kozono, Hideo; Maeda, Yoshiaki) A stable manifold theorem for the Yang-Mills gradient flow. 91b:58042
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- Rendall, Alan D. Reduction of the characteristic initial value problem to the Cauchy problem and its applications to the Einstein equations. 91a:83004
- Strauss, Walter A. ★ Nonlinear wave equations. 91g:35002
- Sukacheva, T. G. see Sviriduk, G. A., 91c:47123
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- Temam, Roger Dynamical systems in infinite dimension. 91a:58110
- see also Eden, Alp; et al., 91b:58233
- Terrones, Guillermo (with McLaughlin, David W.; Overman, Edward A., II; Pearlstein, Arne J.) Stability and bifurcation of spatially coherent solutions of the damped-driven NLS equation. 91c:58100
- Valkering, T. P. see van Groesen, E.; et al., 91k:58117
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- Wayne, C. Eugene Periodic and quasi-periodic solutions of nonlinear wave equations via KAM theory. 91b:58236
- Woolley, M. L. On the mathematical structure of the equations of magnetohydrodynamic equilibrium. 91g:76105
- Zimmerman, A. H. see Aratyn, Henrik; et al., 91j:58054

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- van Baal, Pierre see Braam, Peter J., 91a:58041
- Braam, Peter J. (with van Baal, Pierre) Nahm's transformation for instantons. 91a:58041
- Cho, Yong Seung  $Z_2$ -action on self-dual connections. 91c:58016
- Finite group actions on the moduli space of self-dual connections. II. 91b:58016
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- Gao, L. Zhiyong Einstein metrics. 91d:58036
- Hörváth, Peter A. Dynamical symmetries of monopole scattering. 91b:58030
- Hurtubise, Jacques (with Murray, Michael K.) On the construction of monopoles for the classical groups. 91d:58037
- Itoh, Mitsuhiro Based anti-instantons and gravitational instantons. 91b:58031
- Kamiyama, Yasuhiko The 2-dimensional Betti number of moduli space of instantons. 91c:58017
- The moduli 2 homology group of the space of rational functions. 91g:58039
- Kronheimer, Peter B. Instantons and the geometry of the nilpotent variety. 91m:58021
- Maciejko, Antony Metrics on the moduli spaces of instantons over Euclidean 4-space. 91m:58022
- Manton, N. S. Dynamics of monopoles. 91b:58032
- Murray, Michael K. see Hurtubise, Jacques, 91d:58037
- Nakamura, Yoshimasa Moduli space of  $SU(2)$  monopoles and complex cyclic-Toda hierarchy. 91g:58040
- (with Duncan, Tyrone E.) Remarks on the moduli space of  $SU(2)$  monopoles and Toda flow. 91g:58041
- Nonlinear integrable flow on the framed moduli space of instantons. 91h:58017
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- Items with secondary classifications in 58D27
- Atiyah, Michael Francis Hyper-Kähler manifolds. 91g:35050
- Austin, David M.  $SO(3)$ -instantons on  $L(p, q) \times \mathbb{R}$ . 91b:57020
- see also Braam, Peter J., 91b:58026
- Braam, Peter J. (with Austin, David M.) Boundary values of hyperbolic monopoles. 91b:58026
- Ercolani, N. (with Sinha, Amarendra) Monopoles and Baker functions. 91a:58147
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- Freed, Daniel S. (with Uhlenbeck, Karen K.) ★ Instantons and four-manifolds. 91f:57019
- Furuta, Mikio (with Hashimoto, Yoshitake) Invariant instantons on  $S^4$ . 91j:57029
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- Some remarks on the homology of moduli space of instantons with instanton number 2. 91k:57040
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- Morrison, Kent Yang-Mills connections on surfaces and representations of the path group. 91j:32023
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- Ramadas, T. R. Chern-Simons gauge theory and projectively flat vector bundles on  $\mathcal{M}_g$ . 91j:32022
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- Shervitz, Daniel The global structure of a  $c = 9$  type (2, 2) moduli space. 91d:32030
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- Thelsen, S. *see* Ferrara, Sergio; et al., 91h:32017
- Tricerri, Franco (with Vanhecke, Lieven) Approximating Riemannian manifolds by homogeneous spaces. 91m:53036
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- Vanhecke, Lieven *see* Tricerri, Franco, 91m:53036
- Wang, McKenzie Y. (with Ziller, Wolfgang) Einstein metrics on principal torus bundles. 91f:53041
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- Sonnenschein, Jacob Topological quantum field theories, moduli spaces, and flat gauge connections. 91f:58015

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- Donaldson, Simon K. (with Sullivan, Dennis) Quasiconformal 4-manifolds. 91d:57012
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- Kanno, Hiroaki Observables in topological Yang-Mills theory and the Gribov problem. 91m:81298
- Sullivan, Dennis *see* Donaldson, Simon K., 91d:57012
- Taubes, Clifford Henry Casson's invariant and gauge theory. 91m:57025

## 58D30 Applications (in quantum mechanics (Feynman path integrals), relativity, fluid dynamics, etc.)

- Bordes, José (with Lizzi, Fedele) The space of string configurations in string field theory. 91g:58043
- Brzezniak, Zdzisław Some remarks on the Feynman-Kac formula. 91h:58018
- Laville, Guy Sur un calcul symbolique de Feynman. [On a symbolic Feynman calculus] 91j:58032
- Lizzi, Fedele *see* Bordes, José, 91g:58042
- Nash, Charles Sheaf cohomology and functional integration. 91h:58019
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- Albeverio, Sergio (with Paycha, Sylvie; Scarlatti, Sergio) A short overview of mathematical approaches to functional integration. 91f:58159
- Alekseev, A. Yu. (with Faddeev, L. D.; Shatashvili, S. L.) Quantization of symplectic orbits of compact Lie groups by means of the functional integral. 91d:58087
- Altshuler, M. V. (with Moiseev, S. S.) Supersymmetry in hydrodynamics: vorticity as a ghost charge. (Not in MR)
- Anderson, Arlen (with Anderson, Scott B.) Phase space path integration of integrable quantum systems. 91m:81115
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- Baez, John C. Conserved quantities for the Yang-Mills equations. 91c:58211
- Batenburg, Peter (with Schakel, Adriaan M. J.) A geometrical interpretation of spin. 91c:81036
- Baumgärtel, Hellmut On the existence of measures connected with causality for quantum fields on lattices. 91c:81045
- Bergshoeff, E. A. (with Sezgin, Ergin; Tani, Yoshiaki; Townsend, P. K.) Super  $p$ -branes as gauge theories of volume preserving diffeomorphisms. 91h:83078
- Biau, Matthias (with Keski-Vakkuri, Eiko; Niemi, Antti J.) Path integrals and geometry of trajectories. 91m:81116
- Bollé, D. (with Dupont, Patrick Jean) Stochastic identities on manifolds. 91h:81084
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- Chebotarev, A. M. Necessary and sufficient conditions for the conservativity of dynamical semigroups. (Russian) 91j:22035
- Chen, Wei BRST quantization of topological field theory. 91k:81191
- Cugliandolo, Leticia F. (with Lozano, Gustavo; Schaposnik, Fidel A.) A topological field theory for nonabelian vortices. 91h:81062
- D'Hoker, Eric Recent advances in superstring perturbation theory. 91a:81158

- Dimakis, Aristophanes The initial value problem of the Poincaré gauge theory in vacuum. I. Second order formalism. (French summary) 91a:83062a
- The initial value problem of the Poincaré gauge theory in vacuum. II. First order formalism. (French summary) 91a:83062b
- Dresse, Alain (with Grégoire, Philippe; Henneaux, Marc) Path-integral equivalence between the extended and nonextended Hamiltonian formalisms. 91g:81066
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- Helein, Frédéric Harmonic diffeomorphisms with rotational symmetry. 91m:58040
- Hirsch, Michael D. (with Magill, Michael J. P.; Mas-Colell, Andreu) A geometric approach to a class of equilibrium existence theorems. 91f:90031
- Magill, Michael J. P. see Hirsch, Michael D.; et al. 91f:90031
- Mas-Colell, Andreu see Hirsch, Michael D.; et al. 91f:90031
- Negreiros, Celo J. C. Equivariant harmonic maps into homogeneous spaces. 91j:58045
- Smoller, Joel A. (with Wasserman, Arthur G.) Bifurcation and symmetry-breaking. 91f:58019
- Tapia, V. A novel method to solve functional-differential equations. Application to quantum field theory. 91h:58033
- Wang, Zhi Qiang Equivariant Morse theory for isolated critical orbits and its applications to nonlinear problems. 91c:58021
- Degree of equivariant gradient mappings via Morse theory. 91j:58035
- Wasserman, Arthur G. see Smoller, Joel A. 91f:58019
- Wood, C. M. An existence theorem for harmonic sections. 91d:58055

### 58E50 Applications

- van Baal, Pierre An introduction to topological Yang-Mills theory. 91h:58035
- Kopczyński, Wojciech Variational principles for gravity and fluids. 91j:58052
- Items with secondary classifications in 58E50
- Abramov, Viktor Anatolevich Geometry of BRST-formalism. 91d:81145
- Caviglia, Giacomo (with Morro, Angelo) Generalized symmetries and conservation laws: a Noether-type approach. 91m:58045
- Dijkgraaf, Robbert (with Witten, Edward) Topological gauge theories and group cohomology. 91g:81133
- Foussats, A. (with Laurá, R.; Zandron, O.) About the generalized variational principle used in supergravity. 91d:83125
- Getmanov, B. S.  $N$ -monopole soliton-type solutions of the self-duality equations for an  $SU(2)$  gauge theory in Minkowski space-time. 91h:81090
- Heinzinger, Greg see Noakes, J. Lyle; et al. 91h:58026
- Hu, Shi Ke see Yan, Jun<sup>2</sup>; et al. 91m:81226
- Kerner, Richard Geometry of the Kaluza-Klein theories. 91f:83068
- Klinkhamer, F. R. A new sphaleron in the Weinberg-Salam theory. 91m:81143
- Kranyí, M. Causal theories of evolution and wave propagation in mathematical physics. 91c:73016
- Laurá, R. see Foussats, A.; et al. 91d:83125
- Li, Jiang Nan see Yan, Jun<sup>2</sup>; et al. 91m:81226
- Li, Xin<sup>4</sup> see Li, Zi Ping. 91g:70010
- Li, Zi Ping (with Li, Xin<sup>4</sup>) Generalized Noether theorem and Poincaré invariant for nonconservative nonholonomic systems. 91g:70010
- Morro, Angelo see Caviglia, Giacomo. 91m:58045
- Noakes, J. Lyle (with Heinzinger, Greg; Paden, Brad) Cubic splines on curved spaces. 91h:58026
- Paden, Brad see Noakes, J. Lyle; et al. 91h:58026
- Wang, Ji Chun Cohomological differential operators and the Yang-Mills equation. (Chinese. English summary) 91j:58182
- Witten, Edward see Dijkgraaf, Robbert. 91g:81133
- Yan, Jun<sup>2</sup> (with Li, Jiang Nan; Hu, Shi Ke) The world sheet instanton on cosmic orbifold. 91m:81226
- Zandron, O. see Foussats, A.; et al. 91d:83125

### 58E99 None of the above, but in this section

- Johnson, F. E. A. (with Rees, E. G.) Kähler groups and rigidity phenomena. 91h:58040
- Rees, E. G. see Johnson, F. E. A. 91h:58040

Items with secondary classifications in 58E99

- Angenent, Sigurd B. Parabolic equations for curves on surfaces. I. Curves with  $p$ -integrable curvature. 91h:35102



- Cafagna, V. Global invertibility and finite solvability. 91a:58028  
 Drahek, Pavel Landesman-Lazer type condition and nonlinearities with linear growth. 91b:34035  
 Duzaar, Frank (with Fuchs, Martin<sup>2</sup>) On the existence of integral currents with prescribed mean curvature vector. 91d:49047  
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 Gallot, Sylvestre Volume minimal des variétés hyperboliques: un théorème local et un résultat global. [Minimal volume of hyperbolic manifolds: a local theorem and a global result] 91c:53046  
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 Tze, Chia Hsiung (with Nam, Soonkeon) Topological phase entanglements of membrane solitons in division algebra sigma models with a Hopf term. 91d:81074

## 58Fxx Ordinary differential equations on manifolds; dynamical systems [see also 28D10, 34Cxx, 54H20]

- Arrowsmith, D. K. (with Place, C. M.) ★ An introduction to dynamical systems. 91g:58068  
 Jackson, E. Atlee ★ Perspectives of nonlinear dynamics. Vol. 1. 91c:58052  
 — ★ Perspectives of nonlinear dynamics. Vol. 2. 91k:58030  
 Jetschke, Gottfried ★ Mathematik der Selbstorganisation. (German) [Mathematics of self-organization] 91h:58036  
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 Kosevich, A. M. (with Kovalev, A. S.) ★ Введение в нелинейную физическую механику. (Russian) [Introduction to nonlinear physical mechanics] 91b:58051  
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 Oseiro de Almeida, Alfredo M. Mathematical methods of nonlinear physics. 91k:58031  
 Place, C. M. see Arrowsmith, D. K., 91g:58068  
 Sagdeev, R. Z. see Zaslavskii, G. M., 91d:58062  
 (Shil'nikov, L. P.) see Methods in qualitative theory and bifurcation theory, 91k:58032  
 Zaslavskii, G. M. (with Sagdeev, R. Z.) ★ Введение в нелинейную физику. (Russian) [Introduction to nonlinear physics] 91d:58062

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- Methods in qualitative theory and bifurcation theory ★ Методы качественной теории и теории бифуркации. (Russian) [Methods in qualitative theory and bifurcation theory] 91k:58032

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- Abelson, Harold (with Sussman, Gerald Jay) The dynamist's workbench. I. Automatic preparation of numerical experiments. (see 91f:00012)  
 Akhriif, O. (with Blankenship, G. L.) Symbolic computations in differential geometry applied to nonlinear control systems. (see 91f:00012)  
 (Alina, Claudi) see Conference: Iteration Theory, 91h:58002  
 Arnold, V. I. ★ Équations différentielles ordinaires. (French) [Ordinary differential equations] 91b:34001  
 Blankenship, G. L. see Akhriif, O., (91f:00012)  
 Bunimovich, L. A. (with Kornfeld, I. P.; Dobrushin, R. L.; Yakobson, M. V.; Maslova, N. B.; Pesin, Ya. B.; Sinai, Ya. G.; Sukhov, Yu. M.; Vershik, A. M.) ★ Dynamical systems. II. 91h:58079  
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 (Embrek, Djilali) see Arnold, V. I., 91b:34001  
 Fateman, Richard J. (with Grossman, Robert) Computer algebra and operators. (see 91f:00012)  
 Grayson, Matthew (with Grossman, Robert) Vector fields and nilpotent Lie algebras. (see 91f:00012)  
 Grossman, Robert see Fateman, Richard J., (91f:00012) and Grayson, Matthew, (91f:00012)  
 (Hainsworth, R. N.) see Rabinovich, M. I., 91f:00011  
 Kornfeld, I. P. see Bunimovich, L. A.; et al., 91h:58079  
 (Libre, Jaume) see Conference: Iteration Theory, 91h:58002  
 Maslova, N. B. see Bunimovich, L. A.; et al., 91h:58079  
 (Mira, Christian) see Conference: Iteration Theory, 91h:58002  
 Neimark, Yu. I. Theory of oscillations yesterday and today. (Russian) 91f:01016  
 Pesin, Ya. B. see Bunimovich, L. A.; et al., 91h:58079  
 Rabinovich, M. I. (with Trubetskoy, D. I.) ★ Oscillations and waves in linear and nonlinear systems. 91f:00011  
 Rand, Richard H. Perturbation methods and computer algebra. (see 91f:00012)  
 (Simó, Carles) see Conference: Iteration Theory, 91h:58002  
 Sinai, Ya. G. see Bunimovich, L. A.; et al., 91h:58079  
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- Cabdes de Malavelle ★ European Conference on Iteration Theory. 91h:58002  
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 Iteration Theory ★ European Conference on Iteration Theory. 91h:58002

## 58F03 One-dimensional dynamics, general symbolic dynamics [see also 26A18]

- Bandt, Christoph Self-similar sets. IV. Topology and measures. 91m:58051  
 — Beschreibung von Fraktalen durch symbolische Dynamik. [Description of fractals by symbolic dynamics] (see 91b:00039)  
 — Self-similar sets. III. Constructions with sofic systems. 91m:58050  
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 Carlson, Lee (with Schieve, W. C.) The noisy shift map. 91f:58025  
 D'Alessandro, G. (with Grassberger, Peter; Isola, Stefano; Politi, A.) On the topology of the Hénon map. 91i:58041  
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 Gunji, Yukio Autonomous system including an observer, illustrating dynamic instability of individual microtubules. 91h:58042  
 Hao, Bai Lin (with Zheng, Wei Mou) Symbolic dynamics of unimodal maps revisited. 91g:58069  
 — see also Zheng, Wei Mou, 91i:58043  
 Isola, Stefano see D'Alessandro, G.; et al., 91i:58041  
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 Trow, Paul Degrees of finite-to-one factor maps. 91m:58052  
 Ulmo, Denis see Giannoni, Marie-Joya, 91d:58063  
 Yakobson, M. V. Universal behavior and stochasticity for one-dimensional systems. (see 91j:60003)  
 Zeng, Wan Zhen (with Glass, Leon) Symbolic dynamics and skeletons of circle maps. 91g:58070  
 Zheng, Wei Mou (with Hao, Bai Lin) Symbolic dynamics analysis of symmetry breaking and restoration. 91i:58043  
 — Applied symbolic dynamics for the Lorenz-like map. 91f:58026  
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- Auerbach, Ditzza (with Procaccia, Itamar) Grammatical complexity of strange sets. 91c:58147  
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 Biham, Ofer (with Wenzel, Wolfgang) Unstable periodic orbits and the symbolic dynamics of the complex Hénon map. 91j:58101  
 Broggi, G. see Badli, R., 91c:58069  
 Elsele, P. (with Hader, K. P.) Game of cards, dynamical systems, and a characterization of the floor and ceiling functions. 91h:58086  
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 Haydn, Nicolai T. A. Meromorphic extension of the zeta function for Axiom A flows. 91g:58219  
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 Zheng, Wei Mou The  $W$  sequence for circle maps and misbehaved itineraries. 91h:58115

# 58F05 Hamiltonian and Lagrangian systems; symplectic geometry [see also 70Hxx, 81S10]

- Ahad, A.** (with Depit, André; Elise Sánchez, Antonio C.; Sein-Echaluce, M. L.) A perturbed elliptic oscillator: flow inversion through butterfly bifurcations. **91d:58065**
- Alizawa, Yōji** (with Kikuchi, Yasuhiro; Harayama, Takahisa; Yamamoto, Kenshi; Ota, Motonori; Tanaka, Kenji) Stagnant motions in Hamiltonian systems. **91m:58053**
- Albert, Claude** Le théorème de réduction de Marsden-Weinstein en géométrie cosymplectique et de contact. (English summary) [The Marsden-Weinstein reduction theorem in cosymplectic and contact geometry] **91k:58033**
- Aleksandrov, I. V.** Topological analysis of a Hamiltonian system with a noncommuting complete set of integrals. **91m:58054**
- Aratyn, Henrik** (with Nissimov, E.; Pacheva, S.; Zimerman, A. H.) Symplectic actions on coadjoint orbits. **91d:58066**
- (with Nissimov, E.; Pacheva, S.; Zimerman, A. H.) The Noether theorem for geometric actions and area preserving diffeomorphisms on the torus. **91j:58054**
- Arms, Judith M.** (with Gotay, Mark J.; Jennings, George) Geometric and algebraic reduction for singular momentum maps. **91a:58051**
- Arnold, V. I.** Contact geometry and wave propagation. (Not in MR)
- Avan, J.** (with Talon, M.) Poisson structure and integrability of the Neumann-Moser-Uhlenbeck problem. **91j:58055**
- Barone, Fiorella** (with Grassini, Renato) On the Euler-Lagrange map in classical mechanics. (Italian summary) **91d:58067**
- Baryshnikov, Yu. M.** A Hamiltonian form of nonholonomic variational problems. **91g:58071**
- Belyaev, A. V.** Solutions that define the invariant tori of a perturbed Hamiltonian system. (Russian. English summary) **91b:58053**
- Benettin, Giancarlo** (with Galgani, Luigi; Giorgilli, Antonio) On the persistence of ordered motions in Hamiltonian systems and the problem of energy partition. **91a:58052**
- Bhaskara, K. H.** Affine Poisson structures. **91k:58034**
- Bloch, Anthony M.** (with Flaschka, H.; Ratiu, Tudor S.) A convexity theorem for isospectral manifolds of Jacobi matrices in a compact Lie algebra. **91g:58072**
- Bolsinov, A. V.** Completeness of families of functions in involution that are connected with compatible Poisson brackets. (Russian) **91a:58053**
- (with Matveev, S. V.; Fomenko, A. T.) Topological classification of integrable Hamiltonian systems with two degrees of freedom. A list of systems of small complexity. **91j:58056**
- Bruhwiller, D. L.** (with Cary, John R.) Diffusion of particles in a slowly modulated wave. **91b:58054**
- (Buzyski, P. L.) see Karasëv, M. V., **91c:58055**
- Carriñena, José F.** Theory of singular Lagrangians. **91k:58035**
- (with González, José A.; del Olmo, Mariano A.; Santander, Mariano) Invariant electromagnetic fields. **91m:58055**
- (with Rañada, Manuel F.) Generating functions, bi-Hamiltonian systems, and the quadratic-Hamiltonian theorem. **91b:58055**
- Cary, John R.** see Bruhwiller, D. L., **91b:58054**
- Canasayas, J.** (with Nunes, A.) Qualitative behaviour of the solutions of the Hamiltonian systems  $H(r, \theta, p_r, p_\theta) = p_r^2/2 + p_\theta^2/2r^2 + V(r, \theta)$ ,  $V(r, \theta) = -ar^{-n}(\mu \cos^2 \theta + \sin^2 \theta)^{-n/2}$ ,  $\mu \in [1, \infty)$ ,  $a \in \mathbb{R}^+$ ,  $n \in \mathbb{R}^+ \setminus \{2\}$ . I. Case  $n \in (2, +\infty)$ . **91b:58056**
- (with Nunes, A.) Qualitative behaviour of the solutions of the Hamiltonian systems  $H(r, \theta, p_r, p_\theta) = p_r^2/2 + p_\theta^2/2r^2 + V(r, \theta)$ ,  $V(r, \theta) = -ar^{-n}(\mu \cos^2 \theta + \sin^2 \theta)^{-n/2}$ ,  $\mu \in [1, \infty)$ ,  $a \in \mathbb{R}^+$ ,  $n \in \mathbb{R}^+ \setminus \{2\}$ . II. Case  $n \in (0, 2)$ . **91b:58057**
- (with Nunes, A.) Classification of the solutions of a family of nonintegrable Hamiltonian systems. (Spanish) (see **91j:58055**)
- Celletti, Alessandra** (with Chierchia, Luigi) A report on some new KAM estimates. (see **91b:70021**)
- Channell, Paul J.** (with Scovel, C.) Symplectic integration of Hamiltonian systems. **91g:58073**
- Stable symplectic maps. **91m:58056**
- Chekanov, Yu. V.** see Khessin, B. A., **91b:58071**
- Chen, Qi Keith** (with Ding, Ming Zhou; Ott, Edward) Chaotic scattering in several dimensions. **91a:58054**
- Chen, Shi Gang** see Wang, Guang Rui; et al., **91j:58069**
- Chierchia, Luigi** (with Zehnder, Eduard) Asymptotic expansions of quasiperiodic solutions. **91b:58058**
- see also Celletti, Alessandra, (**91b:70021**)
- Chirikov, B. V.** (with Vecheslavov, V. V.) KAM integrability. **91h:58039**
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- see also Kummer, Martin P.; et al., **91b:58028**
- Condevaux, M.** (with Dazord, Pierre; Molino, P.) Géométrie du moment. [Geometry of momentum] (see **91c:58065**)
- Cooke, David B.** Classification results and the Darboux theorem for low-order Hamiltonian operators. **91k:58036**
- Costa, M. E. V.** (with Girotti, H. O.) Local symmetries in the extended Hamiltonian formalism. **91m:58057**
- Costé, Alain** (with Sondaz, D.) Classification of submersions de Poisson isotropes. [Classification of isotropic Poisson submersions] (see **91c:58065**)
- Coti Zelati, Vittorio** (with Ekeland, Ivar; Séré, Éric) Solutions doublement asymptotiques de systèmes hamiltoniens convexes. (English summary) [Homoclinic orbits of convex Hamiltonian systems] **91j:58057**
- Dazord, Pierre** Réalisations isotropes de Lieberman. Le problème des variables actions-angles dans le cas régulier. [Lieberman isotropic realizations. The problem of action-angle variables in the regular case] **91g:58074**
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- Depit, André** (with Ferrer, Sebastián) Comment on: "Classical Hamiltonian systems and stochastic mechanics: a possible new technique to investigate classical integrability and define quantum chaos" [Phys. Lett. A 137 (1989), no. 4-5, 183-187; MR 90c:58048] by D.
- P. K. Ghikas. **91h:58040**
- see also Abad, A.; et al., **91d:58065**
- Ding, Ming Zhou** see Chen, Qi Keith; et al., **91a:58054**
- Dorfman, I. Ya.** On differential operators that generate Hamiltonian structures. **91a:58056**
- On symplectic and Hamiltonian differential operators. **91m:58058**
- Dressler, Ute** (with Lauterborn, Werner) Ruelle's rotation frequency for a symplectic chain of dissipative oscillators. **91b:58059**
- Dufour, Jean-Paul** (with Molino, P.) Compactification d'actions de  $\mathbb{R}^n$  et variables action-angle avec singularités. [Compactification of actions of  $\mathbb{R}^n$  and action-angle variables with singularities] (see **91c:58065**)
- Ekeland, Ivar** (with Hofer, Helmut) Two symplectic fixed-point theorems with applications to Hamiltonian dynamics. **91m:58059**
- ★ Convexity methods in Hamiltonian mechanics. **91f:58027**
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- Evans, N. W.** Super-integrability of the Winternitz system. **91g:58076**
- Ferapontov, E. V.** see Mokhov, O. I., **91g:58084**
- Fernández, Marisa** (with de León, Manuel) Compact symplectic four-dimensional manifolds not admitting polarizations. **91a:58057**
- Ferraro, Carlo** (with Passerini, Arianna) Symmetries and constants of motion for constrained Lagrangian systems: a presymplectic version of the Noether theorem. **91k:58037**
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- Integrability and symmetric spaces. II. The coset spaces. **91b:58062**
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- Fomenko, A. T.** see Bolsinov, A. V.; et al., **91j:58056**
- Font Arjé, Joaquín** (with Simó, Carles) Families of periodic orbits associated to double heteroclinic connections. **91j:58058**
- Forest, Etienne** A Hamiltonian-free description of single particle dynamics for hopelessly complex periodic systems. **91d:58068**
- (with Ruth, Ronald D.) Fourth-order symplectic integration. **91a:58054**
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- Françoise, Jean-Pierre** Intégrales de périodes en géométries symplectique et isochore. [Period integrals in symplectic and isochorous geometries] **91b:58065**
- Frescura, F. A. M.** (with Lubczonok, G.) Co-symplectic geometry and co-Lagrangian subspaces. **91a:58058**
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- Giraldo, Antonio** see de León, Manuel; et al., **91j:58062**
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- Gironx, Emmanuel** Formes génératrices d'immersions lagrangiennes dans un espace cotangent. [Generating forms of Lagrangian immersions in a cotangent space] **91d:58069**
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- Shul'ga, M. V. Approximate scale symmetry of a nonlinear Schrödinger equation. (Russian) (see 91e:00008)

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